

SIKKIM
Sustainable Development Goals
(Policies & Programmes for their Attainment)



Government of Sikkim

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Executive Summary

Structure of the Economy of Sikkim

Sikkim, India's least populous state, had a population of 610,577 in 2011. It is also the second smallest state in India in terms of land area accounting for 0.22 per cent of land mass. State not only displays exceptional biodiversity, it is endowed with rich natural resources and an exceptionally high forest cover with 47 per cent of area under forests. State enjoys a strategic geo-political advantage, sharing boundaries with Bhutan, China, and Nepal. This gives the state an advantage in terms of the potential for trade and pursuing 'Act East' policy of India. Its Geo-physical characteristics, however, make it meeting the 'last mile' challenges indeed formidable.

2. Government of Sikkim has been quite successful in accelerating its pace of development. During 2007-12, State recorded an average growth of 22.8 per cent as against the national average growth of around 8 per cent. This impressive growth was possible due to commissioning of power projects, strengthening of small and medium scale industries, increased accessibility to markets, increasing financial services and a supportive policy environment. Growth, however, started moderating from 2012-13, because of a general slowdown in the economy and also because of fiscal constraints.

Structure of Employment

3. Together with a shift in structural composition of GSDP, there have been some sectoral shifts in employment. Population census data report a sharp increase in number of workers between 1991-2011, from around 42 per cent of population to a little over 50 per cent, in 2011. However, information from NSSO survey reveals a somewhat different picture. As per NSSO Employment Unemployment Survey 2011-12, agriculture and allied sector employed over 61 per cent of the workers in Sikkim. Total workers engaged in industry (covering mining, manufacturing, electricity and construction) were around 11 per cent of total workforce as against the national average of over 21 per cent. Number of persons who were unemployed also differed and while NSSO survey reported an unemployment rate of 1.1 per cent in 2011-12, the survey of Ministry of Labour reported it to be 12.6 per cent in 2011-12 which increased further 18 per cent in 2015-16.

State of Finances- the Perspective

4. Sikkim, due to its remote and inaccessibility has been categorised as a special category state. This status had provided it greater access to resources from the Union Government. However, with the implementation of the award of the Fourteenth Finance Commission (2015-2020), there has erosion in relative share of these transfers in revenue receipt of the State. Fourteenth Finance Commission, while considering the need to strengthen entitlement based process of transfer of resources, increased the share of divisible pool from central taxes to 42 per cent, but in the process reduced the transfers that were available earlier as grants to make it revenue neutral in a way. Further, overall receipt to GSDP ratio also suffered because

the higher GSDP growth, which created a structural break, contributed very little to the tax and non-tax resources of the State.

5. State has compiled with the Fiscal Reforms path formulated on lines of the recommendation of the Thirteenth Finance Commission. But adherence to the FRBM targets has resulted in a reduction in its capital expenditure relative to GSDP. Fiscal stress has come not only because of a shortfall in transfer of resources from Centre, but also because State's own tax and non-tax revenue did not increase at a pace required/desired. The fiscal stress was recognised by The Union Government but there was hardly any commensurate funds flow.

6. Planning has been an instrument of the development process adopted in the State so far (until 2016-17) and sectoral allocation of plan resources has in a way its allocative priorities. These priorities have to an extent been governed by the centrally sponsored schemes as bulk of the funds for the state by way of transfers from the Government of India was plan transfers. These were generally consistent with the priorities of the State. More than one third of plan resources have been allocated to rural development and social sectors. Industry and infrastructure (including irrigation) have been allocated another 40 per cent of resources, while rest has been allocated to agriculture, forests, urban development including civic facilities.

7. Assessment of resource flow over next 15 years has somewhat been difficult. Apart from the recommendations of the Finance Commissions, this also requires the assumptions to be made with regards to growth of GSDP, resource mobilisation and their allocation. The ratio of revenue receipt to GSDP is expected to inch upwards by 3 percentage points from 26 per cent of GSDP in 2017-18 to 29 per cent of GSDP in 2031-32, because of an assumed buoyancy of tax and transfers of 1.1. Revenue expenditure, however, is expected to remain stable at around 22 per cent (growing close to GSDP rates) allowing continuance of revenue surplus in the State Budget. NK Singh Committee on Fiscal Reforms & FRBM has suggested a debt ceiling for the Centre and the States of 40 per cent and 20 per cent of GDP, respectively. The overall debt is, however, expected to stabilize at 24 per cent of GSDP. Fiscal deficit is projected to moderate and stabilize at 2.5 per cent of GSDP by 2024-25. This is a base line scenario and in line with the current expectations.

Sustainable Development Goals- Overview

8. The SDGs are in a way commitments and goalposts to be achieved over a time frame of 15 years, with implementation strategy and achievements staggered over a time frame of three, seven and fifteen years. These goals may appear to be mutually exclusive and non-overlapping, but the instruments and schemes to realise these goals may not be so. State recognises that the battle to end hunger and poverty is to be principally fought in rural areas, which is where almost two thirds of people would continue to live. Together with a strong political will, it will require investments in the key agents of change – smallholders, family farmers, rural women, indigenous communities, youth and other marginalised people.

9. Investment in rural infrastructure such as roads, transportation, electrification, communication, diversifying rural employment and improving rural-urban linkages can contribute to a more interconnected, inclusive and vibrant society while slowing the exodus of rural people to cities. A strong entrepreneurial spirit already exists in the rural sector but public investments need to be made for the necessary crowding in of investment and production facilities. SDGs are in a way all encompassing and both independent and inter connected.

10. Many of the Sustainable Development Goals have already been provided a legislative mandate. Food Security, Right to Education, Employment Guarantee, Environmental Protection and Pollution Controls and to an extent health have moved from desirable principles to rights, guaranteed by the state. Though, the issue of having a legislative mandate for other goals is a different issue, it may, in the first instance, be necessary to have resource allocation aligned with these goals.

11. Government of Sikkim had earlier commissioned the Boston Consulting Group (BCG) to prepare a Strategic Investment Plan (2016-2021) for economic self sufficiency and social sector excellence. The approach and recommendations of BCG has appropriately been dovetailed in Sustainable Development Goals (SDGs).

Allocation of Resources- the Perspective

12. SDGs are proposed to become the mainstream agenda covering the State Plan, its development strategy and its priorities for allocation of resources through the budgetary process. Overall expenditure on revenue account of the State is expected to increase at around 11 per cent annually. However, since a significant component of revenue expenditure consists of salary payments, inter-se allocation cannot be drastically altered. Resource allocation, therefore, considers incremental re positioning approach, and relatively higher annual increase has been considered for the priority sectors/activities. While sectors with relatively less priority or the sectors which are non-developmental are projected to grow at around 7 per cent annually, sectors like human resource development, rural and urban development, health & family welfare, tourism, skill development are expected to have an allocation, which increases annually by 12-13 per cent, a growth rate which is nearly 80 per cent higher than other sectors.

13. In post FRBM period, capital expenditure have largely been the residual expenditure, to the extent permitted by revenue surplus and the fiscal deficit limits. The Report of the Committee on Fiscal Reforms has suggested adherence to twin targets of fiscal deficit and a ratio of fiscal liabilities to GDP, which again sets a limit for the capital expenditure. But, a lower growth of revenue expenditure relative to the growth of revenue receipts, has made it possible to get a higher allocation for capital expenditure, which is projected to grow at 13.1 per cent annually compared to a growth of 10.9 per cent for revenue expenditure net of interest and pension payments.

14. The projections for revenue and capital expenditure as has been made are consistent with the FRBM targets and their likely path over time. These have, however, been considerably influenced by our assessment of the resource availability. A higher buoyancy of receipts from the State's own taxes and other sources and greater flow of

resources from the Union would permit increased allocation for the priority sectors. Nonetheless, the allocation proposed for revenue and capital expenditure attempts to align that to the SDGs and a significantly higher allocation to sectors impinging on SDG outcomes has been considered.[]

Goal 1- End Poverty in all its forms

15. Eradication of poverty is the first goal for sustainable development. The strategy for poverty alleviation has gone beyond the basic needs approach and also beyond the social protection measures which covered public provisioning of goods and services. Poverty reduction strategies, therefore, consider both income support and empowerment covering health and education.

16. MGNREGA has been a key instrument to combat poverty. It could be seen as a social security intervention for a minimum sustenance level in rural areas. In last four years, an expenditure of over Rs 400 crore was incurred on this employment guarantee programme, which generated 157 lakh person days of work. The programme like MGNREGA have ultimately to culminate in creation of assets and infrastructure which can sustain the economy and create enough opportunities for income generation either by way of regular wage employment or self employment. To this objective, it has been linked with the livelihood opportunities and capability improvement.

17. But the transaction costs in such programmes are usually high, both in the form of administrative costs and higher costs for the assets and infrastructure created through it. Over time, one can consider conditional cash transfers (CCTs) or to a comprehensive basic minimum income support scheme which would consolidate the independent initiatives of employment and income support.

18. In our assessment of resource needs for poverty alleviation under this SDG, we have considered only the resources required for employment generation programmes in rural and urban areas. In the event of a shift to cash transfers or a support for a defined level of basic income, such resources could be earmarked for such interventions. An overall allocation considered is Rs 960 crore in 2031-32, from its current level of Rs. 153 crore, increasing annually at 14 per cent.

Goal 2- End Hunger

19. The sustainable development goal concerning 'end hunger' is a qualitative extension of the earlier goal of eradicating poverty. This goal envisages ensuring access by all people of safe, nutritious and sufficient food throughout the year and eliminating all forms of malnutrition. The instruments for achieving this goal is by increasing production and productivity in agricultural and horticulture, increase investment in food delivery, its procurement, storage and distribution, reduce food wastage and proper functioning of food commodity markets, which ensure fair prices to producers and affordable prices to consumers.

20. Sikkim has had no incidence of death due to starvation and minimum required food availability has not been an issue. Further, consumption expenditure in both rural

and urban areas in Sikkim is more evenly distributed. Even though the majority of the population had a relatively higher consumption expenditure, the number of persons below 80 per cent of the defined calorie levels in rural and urban areas were 20 per cent and 34 per cent, respectively, of the population. State is currently providing supplementary food in the form of Poshak Aahar to children below 5 years. Even identified severely underweight children are provided with special supplementary food. New initiatives under its overall nutrition programme include: Fortification of essential food items with appropriate nutrients; popularisation of low cost nutrient food prepared from locally available raw materials; creating mass awareness among general population about importance of food and nutrition; and Imparting basic health and nutrition knowledge.

21. Public Distribution System is being implemented through the National Food Security Act, 2013 under which beneficiaries of specified schemes are provided subsidised rice. Food waste and losses are currently estimated at around 5 per cent. The effort is to reduce it to zero in next 15 years. Government is undertaking construction of new godowns and converting the godowns constructed earlier so that they meet the storage standards.

22. There are multiple areas of intervention to achieve the targets under this goal and that encompasses the policies and programmes for increasing availability of food and other non-food products. Many of these are covered in other goals of increasing production and productivity, water supply & sanitation and capital works relating to construction of godowns, testing labs and others. Resources of revenue nature under this goal considered are, therefore, confined to food subsidy and nutrition (including under Food Security Act), Integrated Child Development Programme, Pension and other family support schemes providing purchasing power and the expenditure on process improvement and computerisation. Total resources for this SDG are at Rs 70 crore in 2015-16 to increase to Rs 509 crore in 2031-32, at an annual rate of 12.3 per cent.

Goal 3- Good Health & Well being

23. The sustainable goal relating to good health and well being is equally comprehensive and sets a target of reducing the maternal mortality to 70 per 100,000 live births and neonatal mortality to 12 per 1000 live births. It also envisages reducing the death due to epidemics and strengthens the preventive care mechanism, universal health coverage together with an institutional mechanism which can make such treatment affordable.

24. Sikkim is very well placed in terms of the key health indicators of life expectancy, infant mortality and birth and death rates but considerable gap is still to be covered to reach the target levels. Further, in both rural and urban areas, the private expenditure on health care in Sikkim was just around 1 per cent of average per capita monthly expenditure as against a national average of 6.9 per cent and 5.5 per cent, respectively for rural and urban areas. It could partly be due to better availability of the state infrastructure, but it nonetheless indicates the need for better facilities. The NSSO survey reveals that while only 34 cases of ailments in rural areas and 67 cases of

ailments in urban areas were reported in Sikkim as against a national average of 89 ailments in rural areas and 118 ailments in urban areas, the ailments reported in urban areas for persons in age group 60+ were 1.5 times of the national average. Further, there was virtually no coverage for expenditure support in Sikkim.

25. However, notwithstanding fewer cases of ailments and hospitalisation in Sikkim relative to national average, hospital facilities in public sector, particularly in urban areas are hardly adequate. However, HSC/PHC catered to nearly 88 per cent of patients in rural areas and together with public hospitals, their coverage was 96 per cent compared to a national average of under 30 per cent. One of the sub targets under this SDG is to ensure that all deliveries of babies take place at institutional centres. In Sikkim 83.5 per cent and 72.9 per cent of the total births in rural and urban areas, respectively took place in public hospitals. Average expenditure incurred on account of child birth was 44 per cent of the national average in rural areas and 34 per cent of national average in urban areas.

26. Reducing maternal mortality to 7, completely eliminate the epidemics of major diseases, bring road safety standards to best in India, ensure universal health coverage, reduce the illness and deaths arising due to environmental related issues and strengthen the institutional mechanism of reporting, reviewing and research are the targets under health and well being related goals. The instruments for achieving these goals among others are creation of adequate infrastructure of hospitals and health care centres, system of providing access to these facilities at affordable levels to persons and improve the capabilities of the institutions through research and training .

27. Janani Suraksha Yojana (JSY) is being implemented to increase institutional deliveries. Through this scheme, free drugs, free diagnostics, referral transportation, free diet and free blood services are provided to pregnant mothers and infants. State is implementing Revised National TB Control Programme (RNTCP). The National Vector Borne Disease Programme (NVBDCP), an umbrella programme for prevention and control of Malaria, dengue, Filariasis, Kala Azar, Japanese Encephalitis and Chickengunia is also under implementation. A programme of vaccination against Hepatitis B was launched in 2001 and is being continued. The National Programme for Prevention and Control of Cancer, Diabetes and Stroke (NPCDCS), Infection management & Environmental Plan (IMEP) and Bio-medical Waste Management Programme are under implementation. These programmes will help in achieving goals relating to prevention and control of many diseases. For reduction of road accidents and deaths arising out of these accidents a system of information and linking of such information to the network of health centres is being conceived.

28. Overall allocation of resources under this SDG is projected to increase from Rs 236 crore in 2017-18 (BE) to Rs. 1212 crore by 2031-32, increasing annually at 12.4 per cent. The Boston Consulting Group (BCG) has suggested capital expenditure of Rs. 1343 crore in health care sector, which has also been considered.

Goal 4- Inclusive & Equitable Quality Education

29. Two important components of empowerment are health and education as these are critical for improving human capabilities. Broad long term vision under education and human resource development is to ensure that within next 15 years, all boys and girls, with complete elimination of gender discrimination, have access to quality early childhood care and preprimary education, complete primary and secondary education with effective learning outcomes and have access to affordable and quality technical, vocational and tertiary education.

30. Literacy levels in Sikkim are better than the national average. These have also shown considerable improvement over the years, both for male and female literacy. NSSO survey on Education indicates that 12.8 per cent of males and 13.6 per cent of females were not literate in Sikkim as against the national average of not literate males and females of 24.3 per cent and 37.9 per cent, respectively. The relative advantage at lower level of educational attainment, however, evaporates at the level of diploma holders and at post graduate level. General education has continued to dominate and has remained the most preferred stream. Only 1.2 per cent of students in rural areas and 5.4 per cent of persons in urban areas were in professional as against the national average of 2.4 per cent in rural areas and 8.0 per cent in urban areas, respectively. The government operated and private aided institutions catered to nearly 50 per cent of the aggregate enrollment for professional courses. However, in medical and IT/Computer related courses, private unaided institutions were the major provider of education

31. Sikkim is fairly well resourced in terms of school education. However, there are some key gaps in the school system that need to be addressed, namely: Shortage of classrooms and teachers at the primary level: E.g., 22 per cent schools with less than 5 teachers in the primary wing; Some basic infrastructure deficits: E.g., 34 per cent schools without electricity, 64 per cent without boundary wall; and Sub-par learning outcomes: E.g., 57 per cent class 5 students cannot read Class II text, pass rate for both Class X and XII boards is lower than national average.

32. Broad SDG targets for education sector are to facilitate children to use knowledge acquired in normal classroom, improve quality of education at all levels, attain basic proficiency in language for effective communication, equip teachers to tap spontaneous learning potential of children in a print rich environment and calibrate Higher and Technical Education to become increasingly job oriented

33. In order to enhance the effectiveness of education system, the Government on its part has taken up the mission to revamp the system to make it equitable, holistic and inclusive. An extensive programme for evolving a suitable curriculum and training all teachers in computers was taken up during the 12th Five Year Plan and is proposed to be continued. Overall development of the infrastructure will be done to provide facilities such as: (a) construction of playground; (b) construction of multipurpose halls; (c) construction of separate toilets for girls and boys along with proper drinking water facilities; and (d) construction of toilets for students with special needs. To undertake the Quality Mission for School Education, the department will focus on

reducing the dropout rates, adopt standards developed for quality school governance and encourage accreditation of schools. The Hon'ble Chief Minister's Special Merit Scholarship Scheme is being continued wherein the selected students are sent to the best public schools of the State and country. The Quality Mission for Higher and Technical Education involves strengthening the already established Sikkim University, opening new polytechnics in remote areas to facilitate the vertical progression of vocational education for students and encouraging the development of skill based learning.

34. BCG has identified resource requirements of Rs. 950 crore for improving access and quality of education, consisting of both revenue and capital expenditure. While the capital component has separately been considered under demand for grants at aggregate level, the revenue expenditure needs has been incorporated and is subsumed in overall projected resource allocation. Overall allocation of resources (revenue expenditure) for education sector is projected to increase from Rs. 190 crore in 2017-18 (BE) to Rs. 963 crore in 2031-32, showing an impressive growth of 12.3 per cent with an expenditure buoyancy of 1.06.

Goal 5- Gender Equality

35. Gender equality has one of the key considerations for the development strategy underlying the sustainable development. While elimination of discrimination and violence against all women and girls has been the key target, the SDG of gender equality envisages their effective empowerment and their active participation at all levels of decision making. Sikkim is placed favourably in gender equality parameters. In education field, the number of girls per 100 boys, except at the pre-primary level exceeds 100. The NSSO data, based on their employment survey of 2011-12 indicate that for each 100 males in labour force in rural areas, there were 84 females. In urban areas, this ratio is lower at 0.44, but this is significantly better than the national average.

36. In Sikkim 32.6 per cent of women were willing to work for various activities, including animal husbandry, food processing, weaving and tailoring. But 29 per cent of women in Sikkim were seeking initial finance on easy terms and an equal number the required training for undertaking activities other than domestic work. The rate cognizable crime against women in Sikkim shows some diverging trends. While Sikkim had very low rates of cruelty by relatives and cases of abduction relative to the national averages, but the rate has been accelerating, particularly post 2001. This reversal of trend has indeed been disturbing. Rape cases in Sikkim were not only higher than the national average, these were again on rise.

37. The gender equality for Sikkim primarily concerns with the empowerment of females in all respects, social, economical and psychological. It encompasses measures to improve their capabilities through training, making legal system to recognise them as independent in schemes, programmes and at all places where it matters. Cultural norms, rule of society and mechanisms through which final outcomes are determined are the three elements which lead to gender disparities,

and these are proposed to be addressed in a time bound manner. Initiatives which are administrative and legislative have either been taken or in the process.

38. Overall allocation of resources for women as the principal beneficiaries is projected to increase from less than Rs. 2 crore in 2016-17 (RE) to Rs. 18.5 crore in 2031-32. Lower allocation should not be construed as being given low priority to gender equality as the other programmes, such as rural employment guarantee, skill development, education, health and other specific intervention are also have women as preferred beneficiaries. Since allocation for these are indicated under respective SDGs and demand for grants, these have not been included here.

Goal 6- Clean water & Sanitation

39. The sustainable development goal concerning clean water and sanitation envisages to ensure universal and equitable access to safe and affordable drinking water to all. Improving water quality, reducing pollution and reducing the proportion of untreated waste water by 50 per cent are the other targets to be achieved in a period of 15 years. Together with the water supply, SDG also consider providing universal access to equitable sanitation and hygiene.

40. Sikkim is the first open defecation free state in India. In terms of the access to electricity, safe drinking water and sanitation, Sikkim has much larger coverage than the national average. The level of satisfaction for water supply arrangements in Sikkim could be seen from the following:

- 64.9 per cent of household in rural areas and 94 per cent in urban areas reported adequate water availability.
- 92.6 per cent in rural and 87.8 per cent in urban areas, households reported of using the treated water.
- Average time taken to reach the water source and waiting there was only 21 minutes in rural areas and 15 minutes in urban areas.
- 96 per cent in rural areas and 80 per cent in urban areas mentioned that they are not required to make any payment for water.

41. With regard to sanitation facilities, the survey observed that most of the household in Sikkim had toilet facilities for their exclusive use. Survey, however, revealed inadequacy of drainage facility in rural and urban areas and 40.2 per cent of rural and 3.0 per cent urban household reported complete absence of drainage facility. Similarly, for the arrangement relating to garbage disposal, 88 per cent of rural and 14.4 per cent of urban household reported of there being no arrangements. 66.2 per cent of household also reported moderate to severe problems of mosquitoes and common household flies. The response of local bodies however was insufficient to tackle this problem and 61 per cent of households had to make their own arrangement to overcome this problem.

42. The question is not only of the accessibility, but rather adequate availability of a reasonable standard of water and sanitation facilities and affordability. There is a need to economise on need and to get technology based solution for collection and

disposal of waste. The targets under SDG has accordingly been set to ensure the access is compete and covers both the adequate quantity and quality aspect. While Sikkim is the cleanest state in India, the problem of management of 73.5 MT of municipal solid waste generated each day from urban centres remains to be tackled. While banning the styrofoam products and use of plastic bottles in government meeting are steps being taken at generation level, but segregation, reduction, reuse and disposal needs to be addressed.

43. Schemes for water supply and sanitation are implemented by local bodies, urban and rural development departments and the department of public health engineering. These departments and agencies consider access, availability, quality and delivery issues. Overall allocation of resources for water supply and sanitation, covering these agencies is projected to increase from Rs. 59 crore in 2017-18 to Rs. 279 crore in 2031-32. There is a need to incentivise implementation and rewarding the innovative ideas. It is suggested that a livability index, which covers availability of civic and other infrastructure facilities (the access), the use of these facilities (the affordability), maintenance and upkeep of these facilities (their operation) and their expansion in terms of future requirements (the perspective) is generated and a separate incentive fund of Rs. 50 crore annually is created.

Goal 7- Affordable & Clean Energy

44. The goal of universal access of affordable clean energy has the twin objective of reducing pollution as also to improve the living standards of persons. The target envisages increasing the share of energy from non-exhaustive renewable sources in overall energy mix and doubles the rate of improvement in energy efficiency. Besides encouraging research and development in generation, it also envisage improvement in transmission and distribution of energy and bringing down the post generation losses in getting electricity to the end consumer to its minimum level.

45. Sikkim is fortunately placed in terms of power availability which matches the demand for power. 100 per cent households in urban areas and 99.1 per cent rural households have access to electricity. Of the house that have access to electricity, only 3 per cent of urban and 11.3 per cent of rural household have temporary connections. Sikkim has energy intensity of 2.54 (KTOE/Rs Billion) as against an energy intensity of more than double this number in Haryana, Punjab, Gujarat and Rajasthan. State has also the advantage of the bulk of energy being from hydro projects which is non polluting.

46. BCG identified major constraints in power sector, such as, time and cost overrun for some of important projects under implementation by independent power producers, debt overhang as 80 per cent of project cost is debt financed, interest cost and low power tariffs which had a bearing on resources of the State. The current system of distribution of electricity through the Department is sub optimal as it does nor provide any incentive for better performance. Inefficiency in this system get concealed in overall performance of the Department. This system is also leads to higher State liabilities. State needs to consider unbundling of power sector with generation by independent entities and transmission and distribution handled by

another entity, which would not only create fiscal space and increase additional borrowing capacity for the government, but also enhance transparency and accountability.

47. The allocation proposed under this SDG is, however, independent of the unbundling. The unbundling to get implemented would also need to be supported to the extent of current revenue expenditure as it would lead to relocation of staff and not any immediate reduction. Further, this could only be facilitated if it is accompanied by an assurance that the existing man power will not be adversely affected in terms of their pay and perks. Overall allocation, including the allocation for supporting solar power generation is proposed to increase from Rs. 107 crore in 2017-18 to Rs. 453 crore in 2031-32. Bulk of this is for transmission and distribution network.

Goal 8- Decent Work & Affordable Economic Growth

48. The development goal of affordable growth not only envisages higher growth of at least 7 per cent plus, but to decouple it from environmental degradation. Together with such a sustainable growth, it visualises full employment which is gainful, productive and optimal in terms of the capabilities of the person. Increased productivity should come through diversification, technological upgradation and innovation. Sikkim has a young population and as the NSSO survey suggests nearly 70 per cent of its population in 2011-12 were in age group of 10-50. These are the people who are either entering the labour market or already a part of it. Further its topography is also not very conducive to agriculture of an extensive nature. Generating employment opportunities outside agriculture is important for sustaining its growth.

49. Sikkim has in the last decade been able to sustain a relatively higher growth in income and government incentives and a right mix of activities have made that possible. The State has abundant opportunities in areas of tourism, horticulture & floriculture, organic products, pharmaceuticals and ethnic handlooms/handicrafts. Sikkim is a small market, but has limited connectivity. While this is a weakness, it could turn into an opportunity for consumer products, sourced locally and consumed locally. The primary focus of the government would, therefore, on providing appropriate skill sets as assessed by National Skill Development Corporation to the people through vocational courses and technical qualification.

50. Skill Development Department has a target to train 1 per cent of population or 5000 youths in addition to another 3000 persons to be mobilised each year. Department would create Centre for Excellence in 12 most promising sectors. Over a medium term, the Department aims to become an established resource centre with formal MOUs with mountain states and NE. Necessary infrastructure and facilities are being created. It has been observed that people in Sikkim are to an extent risk averse and have not taken up to entrepreneurship in any big way. It would be important to see many vocationally trained youths taking to setting up establishments rather than becoming job seekers. The Skill Development Department is considering setting up a E-Hub (Entrepreneurship Hub) at Gangtok.

51. For resources under this SDG, small scale & village industries, horticulture & floriculture and training is only considered as other industries, agriculture, IT/ITES and tourism are being included in other SDGs. Overall resources is projected to increase from Rs. 150 crore in 2017-18 to Rs. 727 crore in 2031-32 at annual rate of 12 per cent. The horticulture and floriculture has significant potential in the State and the constraint of small market and connectivity bottlenecks may be overcome in these sectors. Similarly, skill development initiatives of the State, if properly harnessed could even cater to North East states and other hill areas.

Goal 9- Industry, Innovation & Infrastructure

52. Industry and infrastructure not only reinforces each other but critical for a sustained growth. This SDG envisages promoting inclusive and sustainable industrialization and, in fifteen years significantly raising industries share of employment and output. This will require not only credit and other financial services but other infrastructure of energy, connectivity, marketing and innovation. Manufacturing has been contributing to about a third of GSDP of the State, and a significant part of that comes from organised manufacturing, which has performed better than national averages. Investment and employment in small scale sector also increased at a faster pace. Industrial performance in Sikkim considerably benefited from North East Industrial and Investment Policy (NEIIP), which provided a tax free regime to industries in this area.

53. While the industrial performance during the last 10 years have been impressive, sustaining that growth, particularly without the tax breaks will need to be considered. State has some inherent constraints of small local market, connectivity, transportation costs, limited credit support and local entrepreneurship, which would need to be tackled. At the State level, there is need for an institutional arrangement which regularly interacts with stakeholders and addresses their concerns. Target under this SDG, therefore, include establishing a reliable telecommunication network, improve road infrastructure, review industrial location policy and the incentives, ensure adequate credit flow and have an innovation fund created.

54. Natural topography and small scale of operation poses formidable hurdles in providing telecommunication coverage in the State. Measures to be taken to improve connectivity in the State could briefly be the following:

- Speedy implementation of BharatNet Project that provides stable Internet Connectivity from Block to the GPUs.
- STM on Microwave could be provided to all the Subdivisions. Wimax towers may be set up at vantage points all across the state.
- Where neither BharatNet nor Microwave is possible because of terrestrial or Line of Sight issues, high capacity 32 mbps VSATs (IDDR) may be installed.
- Power Grid Corporation of India Limited (PGCIL) may be advised to use Optical Ground Wire (OPGW) at the time of installation of the power pylons.
- BSNL may be sufficiently compensated and funding from Universal Service Obligation Fund (USOF) may be considered for their operations.

- Private players should be encouraged to provide Internet and GSM mobile service across the state by suitable funding options including invoking corporate social responsibilities.

55. Besides telecommunication, road connectivity is an important issue. NH 10 is the lifeline of Sikkim as it links the State to the main land. While new initiatives of improving the road connectivity have already been announced, it would be important that these are implemented expeditiously. Sikkim is shortly getting an airport, but that should get optimally operational in next 1-2 years. BCG has identified IT/ITES as an important non-polluting non-farm activity for income and employment generation. It has suggested that the Sikkim Government could consider captive BPO for government services and skill based centre of excellence as two models for implementation.

56. Overall resources for these initiatives that could be allocated is assessed at Rs. 1121 crore by 2031-32, increasing at an annual rate of 11 per cent from their current level of Rs. 278 crore. Resources proposed do not include the allocation that may be needed for setting up an Innovation and Starts Up Support Fund. A separate allocation of Rs 50 crore annually could be considered for this purpose.

Goal 10- Reduced Inequality

57. Accelerated economic growth to be sustainable needs to percolate down and its benefits should get progressively reach the bottom 40 per cent of population. The SDGs, therefore, envisage a preferential access to such population together with disadvantaged groups. Outcome of growth must be measured in terms of the convergence or 'catching up' of the people who usually get left out in this process.

58. Reduction of inequality could be considered from two points. First, is from the point of accessibility of social and economic services to all. Second is from the point of view of improving the overall level of consumption of bottom 40 per cent of population. Overall per capita consumption of a person in Sikkim has been higher than the national average, but the gap has been narrowing and in 2011-12 it was almost at the national average levels. The rural-urban gap in per capita expenditure in Sikkim has generally been lower, but there are indications of widening rural-urban disparity.

59. The targets for equality has been set in a way that it results better living standards and an empowerment for population which is at vulnerable levels of income or resource endowments. It, therefore, considers identification of persons through periodic verification who are considered vulnerable and have targeted programmes keeping their priorities in consideration.

60. While resources for ensuring equality and improving the economic status of bottom 40 per cent of population would flow under different demands for grants, such as education, health, poverty alleviation programmes, industry and programmes for development of agriculture and allied activities, under this SDG, two interventions are specifically being proposed. These cover land records and special interventions for

marginalised sections and total allocation is projected to increase to over Rs. 100 crore in 2031-32 compared to Rs. 20 crore in 2015-16.

Goal 11- Sustainable Cities & Communities

61. Sustainability of cities and communities needs to be measured on broadly four parameters- housing, civic amenities (including the education and health infrastructure), transportation and the facilities for income generation. The SDG for sustainable cities and communities accordingly envisage to provide for these requirements. Since its merger with India, the State has seen rapid urbanisation and towns areas have expanded beyond their notified limits. The projected urban population for 2050 in the state is 50 per cent as against around 11 per cent in 1991. With limited land for development and expansion, urbanisation has mostly been unplanned.

62. Sikkim is relatively better placed in terms of housing related parameters. Nearly 60 per cent rural and 98 per cent of urban household have pucca houses. Further 81.5 per cent in rural and 94.2 per cent in urban areas reported to have secured tenure for their accommodation. Similarly, in terms of availability of transportation facilities the satisfaction ratio of having to travel not more than 5 kms for work was close to 90 per cent. In water supply and sanitation (particularly the availability of toilet facilities), Sikkim has also been favourably placed.

63. The government has targeted two focus areas: urban governance and capacity building; and spatial and economic planning. The target under this SDG, therefore, envisages improving all habitations, including the non-urban habitation. The Government realises that any initiative for sustainable cities and habitations will not be complete until it incorporates the economic generating activities as part of this package. State, therefore, has envisaged creating self help groups and supporting them .

64. BCG consultants, while suggesting a road map for economic self sufficiency and social sector excellence, have proposed among others, construction of houses in urban and rural habitations for poor under Pradhan Mantri Awas Yojana (PMAY). It also proposes complete coverage of habitations for water supply. State is also fully committed to Swachha Bharat Mission and takes necessary steps for sewerage, sanitation, water supply, transportation, civic amenities and solid waste management. It also has a private sector participation plan under the corporate social responsibility.

65. As indicated, primary consideration for sustainable cities and communities are housing, civic amenities, transportation and opportunities for livelihood. Resources have accordingly been considered under these broad categories. Overall allocation is proposed to increase from a little over Rs. 100 crore in 2017-18 to Rs. 538 crore in 2031-32, with an average annual increase of over 12 per cent. However, since there are multiple users, each one with a different implementation strategy, there is need to have an institutional system of incentivising, which is also being considered.

Goal 12- Responsive Consumption & Production

66. Responsible production and consumption have inter temporal consideration and the concern for our future generations. The SDG, therefore, envisages reducing food waste along the entire supply chain and reducing the input in its production. It also suggests to implement policies and programmes that discourages wasteful or avoidable consumption of non-renewable resources and encourages technology based solution.

Sikkim considers sustainable consumption and production pattern as prerequisite for sustained growth in the long run. For sustainable consumption it consider elimination of waste as one of the major goals for being achieved in a defined time frame. In so far as production is concerned, the major emphasis is on ecologically friendly industrial products and organic food products. Sikkim is a pioneering State in organic farming.

67. BCG in its report has provided a road map for organic farming. State has proposed to focus on 4 crops of ginger, turmeric, large cardamom and buckwheat and has proposed to cover about 14,000 hectares under these crops. State has put in place a plan across the entire value chain covering production, processing and marketing. Production cluster have been identifies where Farmers Producing Companies could be formed. Input subsidies and training is provided so that this plan catches on. The total production of these four crops may reach around 32,000 tonnes to provide enough economies for processing and marketing. Sikkim has a clear head-start in organic products market, expected to be of Rs. 22,545 crore by 2025, as it was declared the first "fully organic" state in India as early as in January 2016.

68. Sikkim, even though has abundant water resources, irrigation programmes have constraints, largely imposed by its very geographic nature. Assured irrigation not only improves the yield levels, but makes it possible for year round cultivation. Government has already been implementing the programmes of soil testing, identifying nutrient deficiency, recommending the best nutrient mix for the farmers. Losses from production stage to ultimate consumer are also attended through construction of godowns on scientific lines, a well designed MIS to effectively match supply and demand schedules, public awareness about reduction of wastage and these are proposed to be continued.

69. Overall allocation for responsive production and consumption is projected to increase from Rs. 138 crore in 2017-18 to Rs. 645 crore in 2031-32, showing an average annual growth of 11.6 per cent. Three sectors/activities have been considered under this SDG, comprising agriculture, animal husbandry & fisheries and the organic farming. All these are production related and are instrumental in sustained production which at the same time is responsive to current and future needs.

Goal 13- Climate Action

70. Sustainable development and climate are inseparable and need to be considered together. Climate action is particularly relevant for Sikkim in terms of its topography and physiological characteristics. Sikkim has enacted a Bio diversity Board

Act for utilisation of its biological reserves. Some of the initiatives that are proposed for climate related actions are the following:

- To convert State into scientific temperament zone to achieve sustainable development
- To make society in Sikkim climate resilient and environment friendly so that the melting glaciers do not cause large scale devastation in downstream areas
- In areas of technology transfer and eco-tourism foster innovation and preservation of rich traditional knowledge
- Set up a Sikkim State Remote Sensing Application Centre for mapping and land use pattern for area specific development strategy
- Have a Biotechnology division to support biotechnology based research for food security, use of barren and unutilised land mass, development of high yielding varieties of crops through traditional/genetic breeding, bio-fertilizer, identifying suitable varieties of trees/fruit trees to improve nutritional levels.

71. Targets set under this SDG relates to implementation of these initiatives and creating the necessary infrastructure. It concerns with development of technology based options and support research both in public sector and other institutions. In the long run, the objective is to strengthen the means of implementation and revitalize global partnership for sustainable development in line with the commitments of our country.

72. Climate action operates at the level of production covering primary and secondary sectors, consumption and delivery of products and services and the underlying objective is to meet the increased demand while sustaining the ecological balance. There are programmes already under implementation relating to integrated watershed management, forest conservation, social forestry and fodder development and research for ecological regeneration, which would be strengthened appropriately. Overall resources that are proposed for these activities is projected to increase from Rs. 118 crore in 2017-18 to Rs. 570 crore in 2031-32. Climate change initiatives, besides the resources, would depend on community support as they are the key stakeholder.

Goal 15- Life and Land

73. Sikkim is richly endowed with natural resources. It is a home to five agro-climatic sub-zones, which has resulted in tremendous bio-diversity conducive to the cultivation of a wide variety of crops. Nearly 80 per cent of its area is under forest cover, although only half of this constitutes very dense forest and there exists only a small potential for exploiting timber. Sikkim's hot springs have high sulphur content and are famous for their medicinal and therapeutic value. Streams and rivers provide the State with the potential to generate at least 8,000 MW of hydro power, of which around 6,000 MW of generation projects are in various stages of progress. Over the past decade Sikkim has taken a pro-active environmental stance by implementing various laws to preserve its natural habitation.

74. The life and land related SDG has two objectives. The first one is to sustain the harmonious coexistence of human settlement with the nature and preserve its serenity. The second is to derive economic benefits from this, by developing in a manner that it can both be preserved, appreciated and generate economic returns to the State and the community. It is with objective in mind, development of tourism has been included as a part of sustaining life while preserving the basic nature of the land.

75. Tourism concentrates on Sikkim's cultural heritage, natural beauties, religious and mythological linkages and adventure tourism. 12 projects have been identified under tourism: Eco Tourism & Bovine Park; Artificial Rock climbing; Tantra, Mantra & Yantra Centre; MICE (Meetings, Incentives, Conventions & Exhibitions) Centre; Ramayana Eco Villages; Reptile park; Rishi Kutirs; International Standard Golf Course; Yak Golf Course; Monasteries & Temples; Sky Walk; and Boating. Over 7 lakh tourists visited Sikkim in 2015, generating more than Rs. 500 Crore revenue for the state. Sikkim could potentially generate Rs. 1,500-2,500 Crore as tourism revenue by 2021 and more than double this amount in next 10 years. BCG has suggested an investment of Rs. 1540 crore in development of theme based centres, proper marketing and connectivity for increasing tourist flow in the State.

76. Other than tourism, land and people deal with issues relating to effective management of waste, preserving eco system in such a manner that there is a balance between its use and regeneration. This is a dynamic process and there has to be an institutional mechanism which undertakes research, reviews implementation and fine tune policies on a continuous basis. Keeping these into consideration broad targets over different time frames have been identified .

77. The instruments for achieving the targets indicated above are spread across many sectors and there is an overlap. The intervention concerning forest conservation, afforestation and the reversal of the trend of desertification and land degradation are already included in the SDG relating to climate change. In view of this resource allocation considers only wild life preservation, disaster management and relief associated with it to redress the difficulties faced by the residents and tourism. Overall resources, other than for the purpose of capital formation and physical assets creation, is projected to increase from Rs. 90 crore in 2016-17 to Rs. 410 crore by 2031-32.

Goal 16- Peace, Justice & Strong Institutions

78. Economic development can take place in an environment of peace and a comfortable law and order situation, because that provides the necessary condition for innovation and initiative. It also requires that rule of law prevails and there is guarantee of property rights to be honored and enforced. Strong Institutions not only facilitate the process but improve the comfort level of investors. The SDGs recognise the need for peace, justice and existence of strong institutions.

79. Rate of cognizable crimes (covering all crimes under Indian Penal Code and the State Laws) sharply declined in Sikkim relative to both its own record and also relative to the national average. However, for certain categories, particularly the crime against children and against scheduled tribes was higher than the national average. A related

issue on peace and justice is the rate of disposal of cases. The proportion of cases disposed off (resulting in acquittal or conviction) for special and local laws at 57 per cent and in cases relating to Indian Penal Code at 20 per cent was better than the national average.

80. While Sikkim has enjoyed peace relative to other States/Regions in the country, the Government is conscious of maintaining this environment through regular patrolling, involvement of local communities and adequate man power who are fully trained and equipped. The current strength of police force in Sikkim relative to its area and population is better than national averages .

81. Resources under this SDG has been considered for training and modernisation of Government employees, modernisation and training of police personnel and for home guards, civil defence, check posts and fire fighting, etc. grouped under peace and protection. Overall allocation under these three broad categories is indicated below (Table 20.5) Rs. 34 crore 2017-18 to Rs. 97 crore by 2031-32. Since Sikkim has international borders, part of expenses on check posts and civil defence is met through grants from Centre. These have been included in the above assessment as the expenditure is finally accounted for in the State's financial statements.

Goal 17- Participation for the Goals

82. SDGs are for people and without their participation these cannot be accomplished. Participation ensures that the goals are achieved and people see them as being realised. State intends to strengthen the communication networks so that shortcomings are communicated immediately for any corrective action that may be called for. It will develop such an infrastructure based on international best practices and seek collaboration through Asian Development Bank or any other institution.

83. The first pillar of implementation is the setting up standards against which progress could be measured. Second pillar is the institutional arrangement for collection of information and third is information flow from persons at large, the ultimate stakeholder.

84. The Department of Information Technology, Sikkim is working towards adopting technology to its highest and best use throughout Sikkim Government Department to improve the service delivery mechanism and also the system of feedback on its programmes/initiatives. Sikkim has embarked on a major programme of making internet available at doorstep of households. The number of household who have computer at their residence and also an internet connection reveal that computer access is with only 19 per cent of rural and 47 per cent of urban households, though better than national average, but below the threshold that should provide the comfort level for proper feed back.

85. Resources for this SDG cover information and publicity, national E governance action plan, Data & Statistics and support to local bodies. Overall resources are projected to increase from Rs. 90 crore in 2017-18 to Rs. 450 crore by 2031-32.

Participation of citizens develops faith in the Government and the reciprocity generated constructive discussions with an outcome which is a win-win for all.

Institutional arrangement for monitoring & reporting

86. A two stage reporting process has been envisaged for SDGs implementation and monitoring. At the level of the Department responsible for implementation of the Goal, there would be continuous monitoring of implementation. It will not only have reporting on identified parameters with a specified time table, there will be concurrent monitoring of implementation. At the second stage, Directorate of Economics, Statistics & Monitoring is being strengthened to provide regular independent feedback based on their information flow.

87. The Directorate is also examining the feasibility of a modified livability assessment which provides the necessary measurement tools for assessing the progress over time, in relation to the targets and also comparative to other localities including inter-se SDGs. Together with mainstreaming of SDGs for the development and resource allocation, a well structured reporting (both in house and at an arm's length) will provide the required institutional set up for SDGs implementation and their effectiveness.

Chapter 1: Structure of Economy of Sikkim

Sikkim, India's least populous state, had a population of 610,577 in 2011. It is also the second smallest state in India in terms of land area accounting for 0.22 per cent of land mass, after Goa. Population is unevenly distributed across the state and population density varies enormously, with 10 persons per sq. km. in North Sikkim 297 per sq. Km. in East Sikkim. It is a mountainous, landlocked state with 10 mountain peaks that rise above 7,000 meters, 84 glaciers and 315 glacial lakes. For the most part, it is difficult to come across vast areas of flat land. Rocky and precipitous slopes make agriculture, transportation and communication difficult.

1.2 Sikkim displays exceptional biodiversity with the cold desert climate of the north and moist deciduous features of the south. Sikkim is listed as one of the 34 global biodiversity hot-spots. This small state is endowed with rich natural resources, represented in its huge floral and faunal biodiversity, abundant water resources, streams, rivers and glaciers, and abundant forest cover with 47 per cent of area under forests. State enjoys a strategic Geo-political advantage, sharing boundaries with Bhutan, China, and Nepal. This gives the state an advantage in terms of the potential for trade and pursuing 'Act East' policy of India. However, being a border state also means a large presence of defence and paramilitary forces, and certain restrictions on the movement of goods and civilians across the state as well as internationally. Article 371F of the Constitution of India, which recognizes and provides safeguards to protect and preserve its unique ethnic character and traditional laws including restriction on people of non-Sikkimese origin to settle in and conduct business in the state, and special provisions related to central taxation.

1.3 Despite the advantages of a small population spread over an equally small geographical area, its Geo-physical characteristics pose special challenges for administration and economic development. Meeting the 'last mile' challenges are indeed formidable. Further this requires the State to adopt a unique approach to development envisaging conservation of forests and ecology, developing industries which are more knowledge intensive such as pharmaceuticals, tourism, organic farming and the sectors which could benefit from its abundant hydro power potential including assured and affordable power.

Growth of Economy

1.4 Government of Sikkim has been quite successful in accelerating its pace of development. During 2007-12, State recorded an average growth of 22.8 per cent as against the national average growth of around 8 per cent. This impressive growth was possible due to commissioning of power projects, strengthening of small and medium scale industries particularly in pharmaceutical sector, accessibility to markets, increasing financial services and a supportive policy environment. Growth, however, started moderating from 2012-13, partly because of a general slowdown in the economy and partly because of fiscal constraints.

1.5 The sectoral composition of the Gross State Domestic Product (GSDP) of Sikkim (Table 1.1 and Fig 1) reveal a kind of structural transformation. The share of industry (comprising mining, manufacturing, electricity and construction) sharply increased from under 30 per cent until 2009-10 to over 60 per cent in later years. Increase in the share of industry, particularly the manufacturing witnessed a sharp rise in 2009-10. But this increase was because of the inclusion of Sikkim under Annual Survey of Industries (ASI) which captures the performance of registered manufacturing sector. As the prior comparable data were not available, the inclusion of ASI results for the first time resulted in a growth of over 2500 per cent for this sector, pushing its share in overall GSDP. However, as subsequent years data reveal, higher share of this sector in GSDP was not a onetime occurrence as its share continue to remain at that elevated levels since then (though growth in GSDP during 2009-10 was indeed an outlier).

Fig 1: GSDP (2011-12 prices and Rs. Crore) and sectoral shares of GSDP

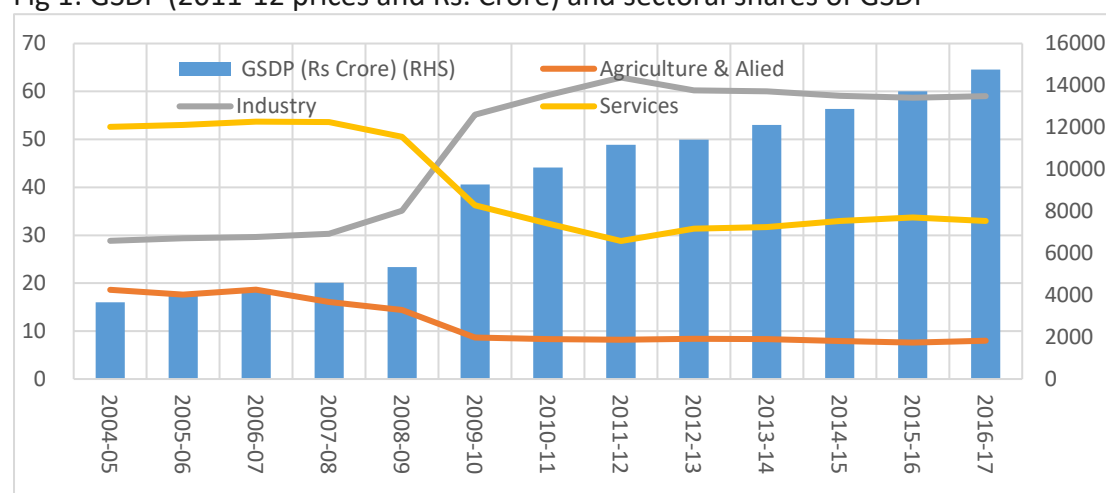


Table 1.1: GSDP (Rs crore at 2011-12 prices) and Sectoral Shares (in per cent)¹

Year	GSDP (Rs Crore)		Agriculture & Allied sectors	Industry	Services
	2011-12 prices	2004-05 prices			
2004-05	3664	1739	18.6	28.8	52.6
2005-06	4022	1909	17.6	29.4	53.0
2006-07	4265	2024	18.7	29.7	53.7
2007-08	4589	2178	16.1	30.3	53.6
2008-09	5341	2535	14.4	35.1	50.5
2009-10	9273	4401	8.7	55.1	36.2
2010-11	10080	4784	8.3	59.2	32.4
2011-12	11165	5299	8.2	62.9	28.8
2012-13	11421	5703	8.4	60.2	31.4

¹ The new series of GSDP was launched in 2015-16 with 2011-12 as the base. The old series with 2004-05 was then discontinued. Though a new series was launched, back years data were not compiled due to methodological issues. The new series significantly increased GSDP of Sikkim in 2011-12 (the base year) for which comparable data are available. In view of this, data for back years are estimated using the growth rates observed in 2004-05 series. The sectoral shares have been kept unchanged and are as observed in the earlier series. The back year assessment lends comparability to data, though these are only proxy estimates, but best ones in the absence of any other information.

2013-14	12114	6152	8.3	60.0	31.7
2014-15	12882	6600	7.9	59.1	33.0
2015-16	13722	7062	7.6	58.7	33.7
2016-17	14751		8.0	59.0	33.0

Source for Table & Graph: Directorate of Economics & Statistics, Government of Sikkim

Chapter 2: Structure of Employment

As with a shift in structural composition of GSDP, there have been some sectoral shifts in employment. There was a sharp increase in number of workers between 1991-2011 and numbers increased from around 42 per cent of population to a little over 50 per cent in 2011. But the increase in number of main workers was relatively small while the number of marginal workers or subsidiary workers increased sharply by over 15 times. Within main workers, while there was a decline in the number of workers engaged in cultivation and agricultural related activities, the number of main workers in other sectors increased sharply, so much so that they overtook the workers engaged in agriculture and allied sectors (table 2.1).

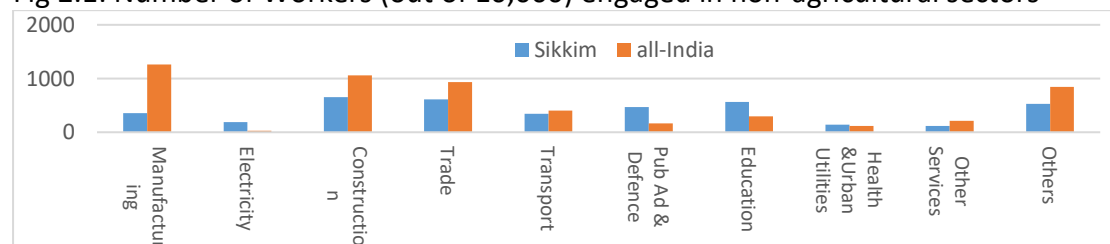
Table 2.1: Workers (main and Marginal) and Population (Numbers)

Particulars	1981	1991	2001	2011	CAGR
Population	316,385	406,457	540,851	610,577	2.22
Total Workers	152,814	168,721	263,043	308,138	2.37
Main Workers	147,436	164,392	212,904	230,397	1.50
Cultivators & Agricultural Labourers	93,497	111,627	110,281	94,289	0.03
Other Workers	53,939	57,094	102,623	136,108	3.13
Marginal Workers	5,378	4,329	50,139	77,741	9.31
Non Workers	163,571	237,736	277,808	302,439	2.07
Ratio of workers to Population (per cent)	48	42	49	50	

Source: Report of the 12th Five Year Plan for Sikkim

2.2 While the workers composition in terms of population census appear in line with the structural shift in the economy of the State, the other employment related statistics appear at variance with this shift. As per the Employment Unemployment Survey of the National sample Survey Office, in 2011-12 (the latest survey for which the information is available), agriculture and allied sector employed over 61 per cent of the workers in Sikkim defined in terms of their usual principal and subsidiary status as against 48.9 per cent for the country as a whole. The number of workers engaged in manufacturing accounted for only 3.54 of the total workers. Total workers engaged in industry (covering mining, manufacturing, electricity and construction) were around 11 per cent of total workforce as against the national average of over 21 per cent. Persons engaged in sectors other than agriculture in Sikkim and the country as a whole is indicated in Fig 2.1 below.

Fig 2.1: Number of Workers (out of 10,000) engaged in non-agricultural sectors



Source: NSSO: Indicators of Employment & Unemployment, 2014

2.3 In terms of overall labour force participation rate and participation of these persons as workforce, the situation in Sikkim is also significantly different than that is observed at national level (table 2.2)

Table 2.2: Labour Force & workforce Participation Rate (per 000 population)

Sikkim/ All India	Rural			Urban			All Persons		
	male	female	Person	male	female	Person	male	female	Person
Labour Force Participation rate all age groups									
Sikkim	586	492	539	628	274	463	594	454	525
all-India	553	253	406	563	155	367	556	225	395
Work Force Participation Rate									
Sikkim	580	487	534	609	273	452	585	450	519
all-India	543	248	399	546	147	355	544	219	386
Unemployment Rate (per cent)									
Sikkim	1.02	1.02	0.93	3.03	0.36	2.38	1.52	0.88	1.14
all-India	1.81	1.98	1.72	3.02	5.16	3.27	2.16	2.67	2.28

Source: NSSO: Indicators of Employment & Unemployment, 2014

2.4 Due to a significantly higher participation in labour force and work force of females in rural and urban areas, both labour force and work force participation in Sikkim is fairly high relative to the national average. Notwithstanding high labour force participation rate, unemployment levels in Sikkim is less (1.14 per cent) compared to national average (2.28 per cent).

2.5 Directorate General of Labour in the Ministry of Labour & Employment started generating numbers of workers and unemployment rate through surveys at more frequent intervals than NSSO. But the results of these surveys, even for a comparable year 2011-12 are significantly different. These surveys have placed unemployment rate in Sikkim very high not only in comparison to the NSSO survey for the State but relative to other States. The Labour Bureau survey take a very thin sample and the blow up based on that thin survey to population often gives erratic results. While these results (Table 2.3) are at variance with NSSO results, considered more robust and reliable, nonetheless indicate that unemployment situation is indeed worsening in recent years.

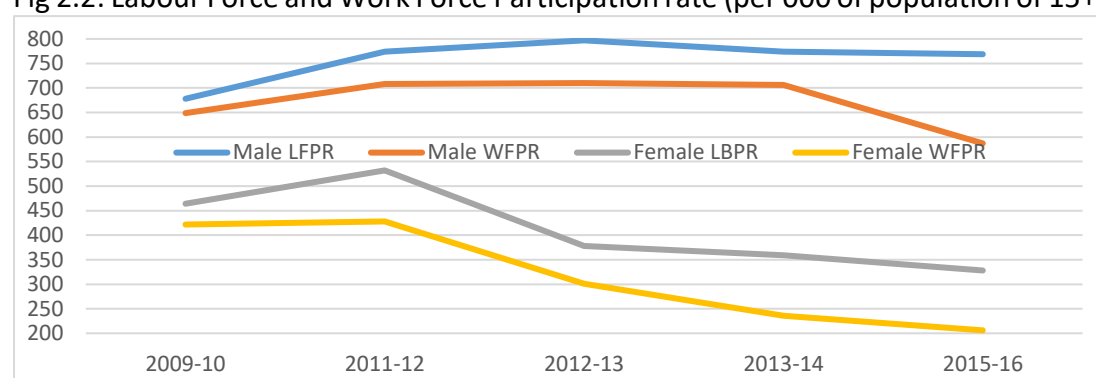
Table 2.3 Unemployment Rate (per cent) of persons 15 years and above on Usual Principal Status

	RURAL			URBAN			RURAL + URBAN		
	MALE	FEMALE	PERSON	MALE	FEMALE	PERSON	MALE	FEMALE	PERSON
2009-10	2.8	6.8	4.4	8.8	20.8	12.4	4.3	9.1	6.0
2011-12	8.1	16.4	11.3	10.4	51.1	22.9	8.5	19.5	12.6
2012-13	11.3	18.3	13.4	9.7	29.6	14.8	10.9	20.4	13.7
2013-14	9.2	25.6	13.8	7.0	68.4	22.8	8.8	34.3	15.7
2015-16	11.8	35.0	18.4	6.7	46.4	16.7	23.7	37.2	18.0

Source: Ministry of Labour & Employment. Various Rounds

2.6 The data from Labour Bureau also reveal that there has been a negative growth in persons employed in recent years. In both male and female, there has been a decline in labour force participation rate as also the participation rate in work force per thousand of persons in the age group 15 years and above (usual principal status) as indicated in Fig 1.3. In case of female, the decline is very sharp whether we consider the labour force participation rate or the rate of absorption. Workforce participation rate for both male and female declined by 17 per cent and 52 per cent, for male and female, respectively in 2015-16 compared to 2011-12. There was also a decline of 38 per cent in labour force participation rate for female during this period. It is difficult to get any explanation for such a sharp decline in workforce participation of female during this period, though it may partly be due to their opting for skill upgradation or education.

Fig 2.2: Labour Force and Work Force Participation rate (per 1000 of population of 15+)



Source: Director General of Labour Bureau

2.7 But when we look the employment, including its sectoral distribution and GSDP numbers, there appears a disconnect. From the NSSO 2011-12 employment data it appears that value added per worker in industry in Sikkim is over 35 times the value added per worker engaged in agriculture and allied sectors. This ratio is just a little over 4 at the national level. From the available data, both of which have either been generated or vetted by CSO of the Ministry of Statistics and Programme Implementation ²it is difficult to find any definite rationale.

² A significant part of GSDP data, particularly in respect of registered manufacturing, mining, electricity, public administration & defence, financial services such as banking and insurance and data for the public enterprises are provided by CSO and incorporated in GSDP estimates prepared by the Directorate of Economics & Statistics of Sikkim. While there are discussions with CSO, data consistency checks and any abnormalities remain generally under surface.

Chapter 3: State Finances- the Perspective

Sikkim, due to its remote and inaccessibility has been categorised as a special category state. This status had provided it greater access to resources from the Union Government. As per the Industrial and Investment Policy for North East, industries in Sikkim have so far enjoyed a preferential treatment in terms of exemption from excise duties. The transport subsidy also entitles the State reimbursement of the cost of transportation to and from Sikkim from the nearest rail head (Siliguri). Further, even in case of plan grants, both for State Schemes and Centrally Sponsored Schemes, there is a higher grant element (90 per cent of funds flow as grants as against 40 per cent for States of normal category).

3.2 Until 2015-16, central transfers comprising tax transfers and transfers by way of grants and taxes. However, with the implementation of the award of the Fourteenth Finance Commission (2015-2020), there has been an erosion in relative share of these transfers in revenue receipt of the State. Fourteenth Finance Commission, while considering the need to strengthen entitlement-based process of transfer of resources, increased the share of divisible pool from central taxes to 42 per cent, but in the process reduced the transfers that were available earlier as grants to make it revenue neutral in a way.

Table 3.1: Fiscal Situation of the State³ (Amount in Rs crore and share to GSDP in per cent)

Particulars	2004-05	2009-10	2010-11	2011-12	2014-15	2015-16	2016-17 (RE)
GSDP ⁴	1739.2	6132.8	7411.6	8906.6	14517.7	17421.0	20108.4
Revenue Receipt	1011.3	2342.7	2149.4	2872.1	4462.0	4853.7	4885.3
Own Tax Receipts	117.0	220.8	281.6	293.9	527.6	592.3	646.1
Non Tax Receipts	111.4	447.7	244.6	244.0	323.8	364.4	362.3
Central Tax Transfers	107.4	374.1	526.2	611.6	809.3	1870.3	2095.0
Grants from Centre	675.6	1300.1	1104.3	1722.5	2427.0	2026.7	1782.0
Revenue Expenditure	842.4	1827.6	2008.5	2429.6	3730.9	4312.7	4624.8
Capital Outlay	355.0	686.9	459.5	665.2	1006.4	1117.9	863.5
Revenue Deficit	-169.0	-515.2	-140.8	-442.5	-731.0	-540.9	-260.5
Fiscal Deficit	186.0	171.7	318.7	222.7	275.4	576.9	602.9
Revenue Receipt/GSDP	58.1	38.2	29.0	32.2	30.7	27.9	24.3
Central Transfers/GSDP	45.0	27.3	22.0	26.2	22.3	22.4	19.3
Revenue Expenditure/GSDP	48.4	29.8	27.1	27.3	25.7	24.8	23.0
Capital Expenditure/GSDP	20.4	11.2	6.2	7.5	6.9	6.4	4.3

³Based on NIPFP assessment and the Memorandum submitted to Government of India

⁴ GSDP is 2004-05 series at current prices .

Fiscal Deficit/GSDP	10.7	2.8	4.3	2.5	1.9	3.3	3.0
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3.3 The share Sikkim in tax transfers increased significantly after the implementation of the recommendations of the Commission, it suffered as receipts from grants declined. Further, overall receipt to GSDP ratio of Sikkim also suffered because of structural shift in its composition of GSDP. Higher GSDP growth in 2009-10, which created a structural break, contributed very little to the tax and non-tax resources of the State. Two factors contributed to this state of affairs. First, the pharma units which contributed to manufacturing growth, transferred most of their products as stock transfers and as such these volumes did not yield revenue to the State. Whatever little accrued to State was from the destination-based Value Added Taxes. Second, in the hydro power generation sector, sale of electricity by NHPC and private companies under PPP arrangements was outside the ambit of State tax system. The free power which the State has been entitled to, may have increased the non-tax revenue of the State, but only if the State was able to sell this surplus power.⁵

3.4 State has compiled with the Fiscal Reforms path formulated on lines of the recommendation of the Thirteenth Finance Commission. But adherence to the FRBM targets has resulted in a reduction in its capital expenditure relative to GSDP. Fiscal stress has come not only because of a shortfall in transfer of resources from Centre, but also because State's own tax and non-tax revenue did not increase at a pace required/desired as indicated above. Successive Finance Commissions (the Twelfth, Thirteenth and Fourteenth Finance Commission) over estimated its revenue potential reducing to that extent non-plan deficit grants. The fiscal stress was recognised by The Union Government but there was hardly any commensurate funds flow. After the acceptance of the recommendations of the Fourteenth Finance Commission, State made a presentation indicating that its revenue potential has considerably been inflated:

- (a) Over the five year period of 2015-20, Sikkim's gross domestic product has been projected to rise by 156 per cent as against an average of 67 per cent on an average.
- (b) Sikkim's tax/GSDP ratio was projected to increase from 4.2 per cent to 6.2 per cent, an increase of 47 per cent, as against an increase of 6.6 per cent for all other States.
- (c) These assumptions resulted in post devolution surplus of Rs 6,181 crore over five year period 2015-2020. Realistic estimates would have resulted in post devolution deficit, making the State eligible for deficit grants.
- (d) The transfers from Finance Commission during 2015-2000 have not envisaged any grant under State specific projects as these were reportedly covered under higher devolution of taxes that the commission had mandated.

3.5 Though these have been recognized and accepted as valid concerns, actual flow of did not materialise to the extent of perceived shortfall. Budget 2017-18, therefore,

⁵ NIPFP- A note on Issues and Options in Fiscal Management of Sikkim

moved on usual basis and that forms the basis for our resource forecast for the State until 2031-32, or for the fifteen years period commencing 2017-18.

Approach Development: Resource Allocation

3.6 Planning has been an instrument of the development process adopted in the State so far (until 2016-17) and sectoral allocation of plan resources has in a way its allocative priorities. These priorities have to an extent been governed by the centrally sponsored schemes as bulk of the funds for the state by way of transfers from the Government of India were plan transfers. These were generally consistent with the priorities of the State. These allocative priorities have evolved on a continuous basis as indicated in Table 3.2.

Table 3.2: Distribution of Outlay, Eighth to Twelfth Plan

Sectors	Eighth Plan	Ninth Plan	Tenth Plan	Eleventh Plan	Twelfth Plan
	(1992-97)	(1998-2002)	(2002-07)	(2007-12)	(2012-17)
Agriculture and Allied Services	10.28	9.28	4.31	4.28	4.94
Energy	19.3	14.41	10.03	5.22	5.13
Industry	3.85	4.2	3.22	1.84	6.09
Roads, Bridges & Transport	14.48	11.63	10.68	6.46	9.67
Roads and Bridges	12.97	10.83	10.15	6.12	2.72
Education	10.7	12.5	16.8	13.62	15.2
Health	4.63	5.2	3.91	5.76	5.75
Tourism	15.2	3.59	2.01	3.46	5.32
Forest & Ecology	2.69	1.85	1.56	2.93	3.24
Rural Development	6.47	3.94	9.51	12.87	15.94
Urban Development	1.21	3.93	2.64	12.45	9.02
Others	11.19	29.47	35.34	31.1	19.7
Total	100	100	100	100	100

Source: Plan Documents

3.7 Total plan allocation during the Eleventh and Twelfth Plan aggregated Rs. 4270 crore and Rs 11325 crore, respectively. More than one third of resources have been allocated in these plans to rural development and social sectors. Industry and infrastructure (including irrigation) have been allocated another 40 per cent of resources, while rest has been allocated to agriculture, forests, urban development including civic facilities.

3.8 The separate allocation of funds for plan has now been discontinued and allocation is now as revenue and capital expenditure. Priorities of the Government have now been articulated in terms of Sustainable Development Goals (SDGs) with a defined target to be achieved in three, seven and fifteen years. But there has be a synchronization of the physical targets with the resources that would be needed.

Resource Projection: Baseline Scenario

3.9 Notwithstanding the removal of the distinction in terms of plan and non-plan resources, an overall assessment of revenue is necessary. Overall resources of the State are its own tax and non tax receipts, transfers from the Union Government by way of devolution of taxes and grants, both statutory and by way of endowments or discretion of the government and its prudent borrowing limits in terms of its FRBM targets and each one needs to be assessed differently.

3.10 Assessment of resource flow over next 15 years is somewhat difficult. Apart from the Finance Commission, the fifteenth and Sixteenth Finance Commission whose recommendations would govern the resource transfers for 2020-25 and 2025-30 periods, this also requires the growth of GSDP and resource mobilisation by way of taxes and others. We have made following assumption to forecast revenue of Sikkim for the next 15 years:

(a) The GSDP of the State is projected to grow at 11.5 per cent annually at current prices. This growth is assumed to compose of a real growth of 7.5 per cent and an inflation of 4 per cent. Four per cent inflation is the mandated rate of inflation that the Reserve Bank of India is expected to maintain (with a deviation on either side of 2 per cent). Real growth has witnessed some deceleration in 2016-17, but is expect to revert to its trend trajectory from 2017-18 on wards. This growth rate of GSDP is also consistent with the rate taken by the NK Singh Committee on Fiscal Reforms. Sikkim has historically witnessed a higher growth relative to the national average, but growth has slowed down in last four years averaging only 5.3 per cent at constant prices. Even if the growth recovers, a growth higher than 7.5 per cent on a trend basis is highly unlikely. Growth in fact may be little moderate.

(b) We have assumed a buoyancy of the State's own taxes (post 2019-20) period as 1.1 . The assumed buoyancy is expected to materialise. Additional factor which would keep the tax receipts at this benchmark level of growth is the assumed growth of 14 per cent in VAT by the GST Council for providing compensation to the States for any revenue shortfall, post GST implementation. For non-tax receipts, we assume a buoyancy of 1 or a growth of 11.5 per cent.

(c) Tax and non-tax tax transfers (grants) from the Union has also been assumed to grow at 12.2 per cent annually with an assumed buoyancy of 1.1. These estimates could be on a slightly lower side, but with a optimistic GSDP growth assumed, the need was felt of pegging the growth of transfers at this level in base case scenario.

(d) Revenue expenditure is expected to grow at the same rate as GSDP. With in Revenue Expenditure, the liabilities on account of contractual obligation of pensions and interest payments have been separately assessed. Interest expenses have been worked out on the basis stock of fiscal liabilities (growing annually by the amount of Fiscal deficit pegged at 3 per cent of GSDP) and an assumed rate of 8.5 per cent interest. With inflation likely to remain aligned to the mandated mean rate of 4 per cent, interest rates for States may hover around 8 per cent. But a slightly higher rate provides some flexibility and also for future uncertainties including a possible

increase in other expenditure. Pension expenses are projected to grow at the GSDP rates.

(e) The capital expenditure is assumed as equal to revenue surplus and the borrowings. It is therefore a derived expenditure. Revenue surplus is again derived.

(f) We have refrained from using the observed long term rates for GSDP, own taxes, transfers from Union and revenue expenditure because of outlier growth in some parameters, methodological changes and wider inter year variations in some.

Table 3.3 Projected Revenue Receipts, Expenditure and Deficit⁶ (Average Annual in Rs in crore)

Particulars	2017-20	2020-24	2024-30	2024-32	Assumptions
GSDP	3,153.0	4,006.9	9,184.5	6,900.3	11.5% annual growth
Own Tax Revenue (OTR)	755.0	1,136.2	2,048.8	2,335.9	12.3% annual growth
Non-Tax Revenue (NTR)	426.2	626.0	1,089.5	1,231.6	11.5% annual growth
Transfers from the Centre ⁷	4,770.4	7,179.7	12,946.2	4,760.2	12.3% annual growth
Total Revenue Receipts	5,951.6	8,941.9	6,084.6	8,327.7	Derived
Interest Payments	438.0	672.6	1,112.4	1,240.4	Derived
Pension Payments	607.8	892.8	1,553.8	1,756.4	11.5% annual growth
Total Revenue Expenditure	5,088.7	7,355.5	2,506.8	4,058.5	11% annual growth
Revenue Surplus	863.0	1,586.5	3,577.7	4,269.2	Derived
Fiscal Deficit	786.3	930.6	1,479.6	1,672.5	Assumed
Salary Expenditure	2,088.0	2,649.5	3,730.2	4,012.6	7% annual growth
OTR/GSDP	3.26	3.34	3.45	3.48	
Transfers from Centre/GSDP	20.59	21.09	21.83	21.98	
Total Revenue/GSDP	25.69	26.27	27.12	27.30	
Total Revenue Expenditure/GSDP	21.99	21.64	21.16	21.07	
Revenue Surplus/GSDP	3.71	4.63	5.96	6.23	
Fiscal Deficit/GSDP	3.44	2.75	2.50	2.50	
Interest, Pension & Salary/GSDP	13.56	12.44	10.90	10.63	

3.11 Other than the expenditure of contractual nature, State spends close to 30 per cent of its revenue expenditure on general administration and expenses which are in the nature of charged expenses. Only about 60 per cent of State's overall revenue expenditure is incurred on the sectors or activities which have historically been considered as developmental. But even the non development expenditure, part of which is incurred on police, justice and others is in a way developmental because that would provide the essential prerequisites for social and economic development.

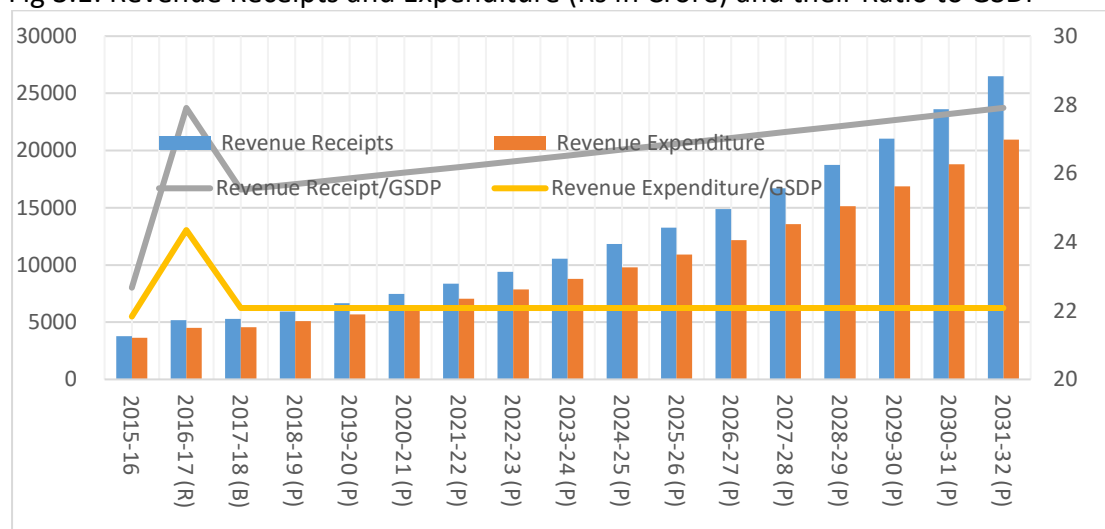
3.12 The ratio of revenue receipt to GSDP is expected to inch upwards by 3 percentage points from 26 per cent of GSDP in 2017-18 to 29 per cent of GSDP in 2031-32 (Fig 3.1), because of an assumed buoyancy of tax and transfers of 1.1. Revenue expenditure, however, is expected to remain stable at around 22 per cent

⁶Average Annual Values as derived based on the assumption indicated in earlier paragraphs.

⁷Include both the transfer of taxes and grants

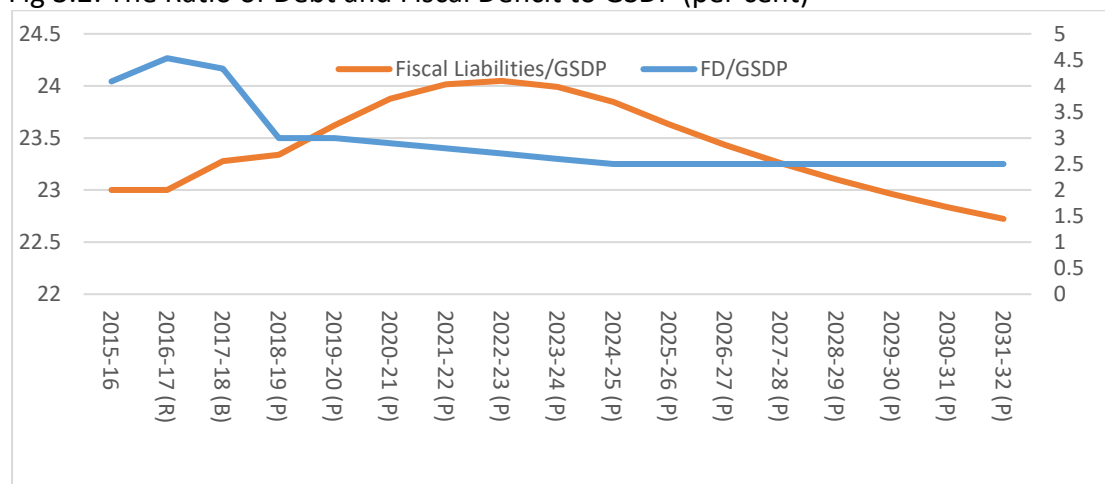
(growing close to GSDP rates) allowing continuance of revenue surplus in the State Budget.

Fig 3.1: Revenue Receipts and Expenditure (Rs in Crore) and their Ratio to GSDP



3.13 NK Singh Committee on Fiscal Reforms & FRBM has suggested a debt ceiling for the Centre and the States of 40 per cent and 20 per cent of GDP, respectively. The Committee has also suggested a moderation in fiscal deficit to GDP ratio consistent with this proposed debt ceiling. Given the current fiscal space, it may be difficult to get to a debt/GSDP level of 20 per cent, though overall debt is expected to stabilize at 24 per cent of GSDP. Fiscal deficit is projected to moderate and stabilize at 2.5 per cent of GSDP by 2024-25 (Fig 3.2).

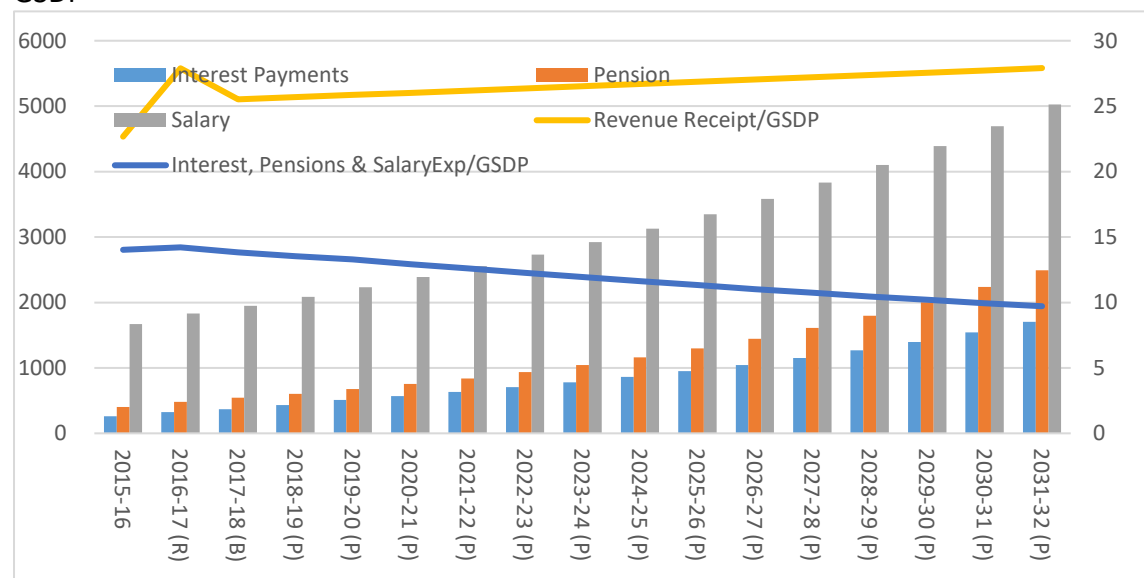
Fig 3.2: The Ratio of Debt and Fiscal Deficit to GSDP (per cent)



3.14 While allocation of receipts may undergo some shift, the structure of revenue receipts may move along the expected lines. The only possible change, that is both envisaged and is desirable, is increase in non-tax receipts from the hydro power segment and tax and non-tax receipts as a result of increased tourist flow and better utilisation of tourism potential. With in overall resource allocation, there is expected

to be some moderation in expenditure for committed obligations, in terms of salary & wages, pensions and interest payments as indicated in Fig 3.3 below.

Fig 3.3: Expenditure of Salary, Pensions & Interest payments (Rs crore) and as % to GSDP



The fiscal scenario considered here is a base line scenario and in line with the current expectations. State is contemplating many structural reforms, particularly in sectors which are resource augmenting, such as hydro power, tourism, organic agriculture and sustainable and inclusive growth and that would a positive impact on its revenue generation. From 2020-21, transfers of resources from Centre would get modified based on the recommendations of the Fifteenth Finance Commission. In such a situation, it may be possible to re-look at receipts and their allocation.

Chapter 4: Sustainable Development Goals- Overview

Government of Sikkim had earlier commissioned the Boston Consulting Group (BCG) to prepare a Strategic Investment Plan (2016-2021) for economic self sufficiency and social sector excellence. BCG identified increasing economic self sufficiency, creating jobs, especially for youth and improving social infrastructure by filling key deficiencies as the State priorities. For revenue generating sectors, it identified hydro power, tourism, organic farming and IT as the key sectors and for enabling infrastructure, school and higher education including skill development and health care as the necessary prerequisites. The approach and recommendations of BCG has appropriately been dovetailed in Sustainable Development Goals (SDGs), which in some ways, implicitly includes these sectors.

4.2 Role of the State has undergone some changes in recent years. Besides the core function of governance and addressing market failures, the role now gets extended to cover equity and to an extent redistribution (Box 4.1).

Box- 4.1: Role of the State

	Addressing Market Failures			Improving Equity
Minimal Functions	Providing pure public goods Internal Security, Law and order, Property rights, Public health, Macroeconomic management, Building perspectives			Protecting the poor Anti-poverty programs, Disaster relief, Public distribution
Intermediate Functions	Addressing Externalities Basic education, Environmental Protection, Rural roads	Regulating Monopoly Utility regulation	Overcoming imperfect information Consumer Protection, Crop insurance, Sectoral credit support	Providing social insurance Family pensions, Unemployment insurance, Direct subsidies
Activist Functions	Coordinating private activity Cluster initiatives, State as an entrepreneur			Redistribution Assets redistribution, Land reforms

4.3 The SDGs are in a way commitments and goalposts to be achieved over a time frame of 15 years, with implementation strategy and achievements staggered over a time frame of three, seven and fifteen years. Sikkim, following SDGs has identified for itself, the milestones and goal posts of each of these SDGs which are separately been discussed in subsequent chapters. These goals may appear to be mutually exclusive and non-overlapping, but the instruments and schemes to realise these goals may not be so. Like MGNREGA could be an instrument for income support for poverty eradication, but it could facilitate reduction of inequality, infrastructure support and sustainable production and consumption level.

4.4 The battle to end hunger and poverty is to be principally fought in rural areas, which is where almost two thirds of people in Sikkim would continue to live. Together

with a strong political will, it will require investments in the key agents of change – smallholders, family farmers, rural women, indigenous communities, youth and other vulnerable or marginalized people. There would be a need to transform the current input-heavy food systems to make it more sustainable by reducing food waste and production forgone through better management and improved techniques. Similarly, non-agricultural operations would need a greater involvement of women, their having a greater access to finance, infrastructure and marketing support and skill upgradation facilities. There has to be a greater participation of women and other marginalised sections of the society in decision-making processes, their rights to land tenure and other property and a greater access to technology and innovation.

4.5 Investment in rural infrastructure such as roads, transportation, electrification, communication, diversifying rural employment and improving rural-urban linkages can contribute to a more interconnected, inclusive and vibrant society while slowing the exodus of rural people to cities. A strong entrepreneurial spirit already exists in the rural sector but public investments needs to be made for the necessary crowding in of investment and production facilities. SDGs are in a way all encompassing and both independent and inter connected.

4.6 Many of the Sustainable Development Goals have already been provided a legislative mandate. Food Security, Right to Education, Employment Guarantee, Environmental Protection and Pollution Controls and to an extent health has moved for desirable principles to rights, guaranteed by the state. Though, the issue of having a legislative mandate for other goals is a different issue, it may, in the first instance, be necessary to have resource allocation aligned with these goals.

Box 1: Expanding Scope of Right to Health

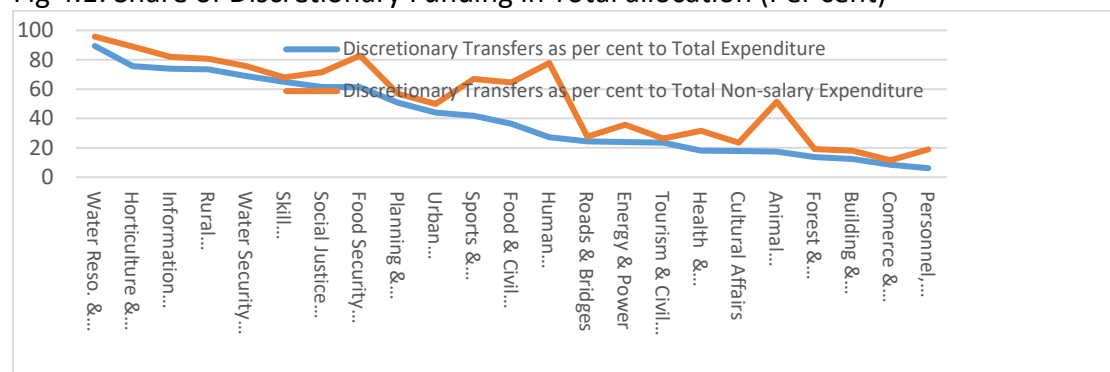
In *Consumer Education and Resource Centre v. Union of India* (AIR 1955 SC 636), the court held that right to health is an essential right for human existence and is, therefore, integral to right to life, guaranteed under Article 21 of the Constitution. In *Bandhua Mukti Morcha v. Union of India* (AIR 1984 SC 802), the court considered right to health as an important human right, which is essential for a life with dignity, thus making right to health also part of right to life. The concept got further expanded in *Paschin Bagga Khet Mazdoor Samiti vs Government of West Bengal* (AIR 1996 SC 426), wherein it held that failure of a government hospital to provide a person timely medical care is denial of the right to life.

Source: India and Sustainable Goals- The Way Forward: Research & Information System for Developing Countries, 2016, page 24

4.7 Three issues are encountered in allocating resources to the SDGs. First issue relates to the accounting arrangement and system of resource allocation. While overall resource allocation is made in terms of Demands for Grants, accounting arrangement follows a different classification. There are therefore many accounting heads under a demand for grants.

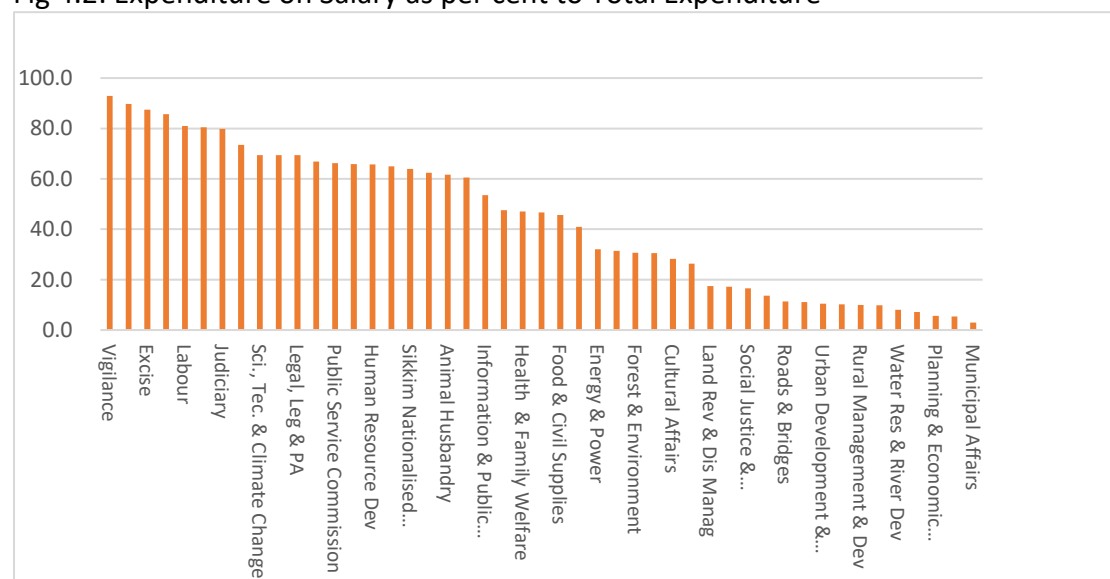
4.8. The second issue relates to discretionary resource availability for different grants. During 2017-18 (BE), 24.5 per cent of total allocation was envisaged to come by way of these grant. But this average conceals the divergence that prevails in the proportion of such transfers to total allocation (Fig 4.1). For some demands, the share of discretionary funding, through NEC, CSS, Nonlapsable pool funding exceeded two thirds of the total allocation.

Fig 4.1: Share of Discretionary Funding in Total allocation (Per cent)



4.9 The third issue relates to the availability of resources after the payment of salary, interests and pensions⁸. Salary accounted for 37 per cent of the total allocation on an average, though variations across the demands are significant (Fig 4.2).

Fig 4.2: Expenditure on Salary as per cent to Total Expenditure



4.10 Salary is a committed expenditure, though different from pensions and interest payments. Further, it is in some way specific, persons are usually allocated to an activity and except at higher levels have little flexibility. Because of these two characteristics, these limit the possibilities of significant reallocation among demands in a medium term perspective, though flexibility increases in the long run.

⁸ The expenditure on Salary as also the total expenditure is an average of 2015-18, the three years period. Expenses on interest payments and pensions are excluded, though its impact is felt only in the Demand for Grants for the Finance Department.

Chapter 5: Allocation of Resources- the Perspective

SDGs are proposed to become the mainstream agenda covering the State Plan, its development strategy and its priorities for allocation of resources through the budgetary process.

5.2 Overall expenditure on revenue account of the State is expected to increase at around 11 per cent annually as indicated in Table 3.3. However, as expenditure on pension and interest payments, is expected to increase relatively faster, revenue expenditure net of these committed contractual liabilities is expected to grow at a somewhat lower rate⁹. Inter-se allocation of resources for different demand for grants has, however, been attempted in terms of the priorities that should be attached to different activities as grouped under the Demand for Grants (Table 5.1).

Fig 5.1: Projected Revenue Expenditure (Rs crore)

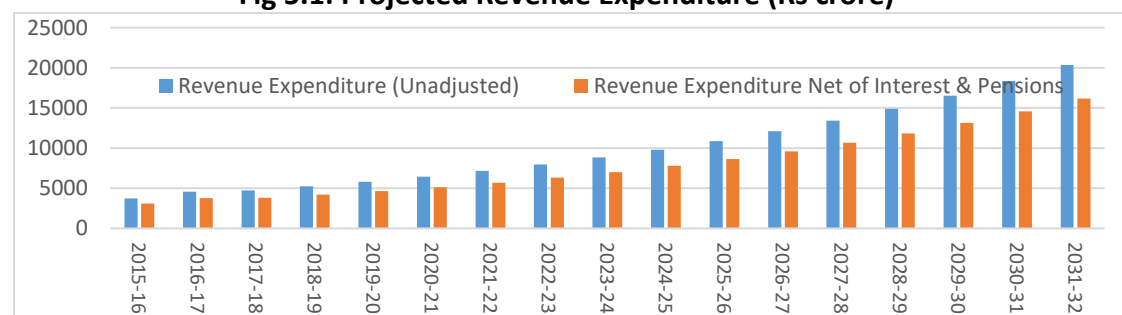


Table 5.1: Allocation of Resources (Revenue Expenditure) Selected Years (Rs Crore)

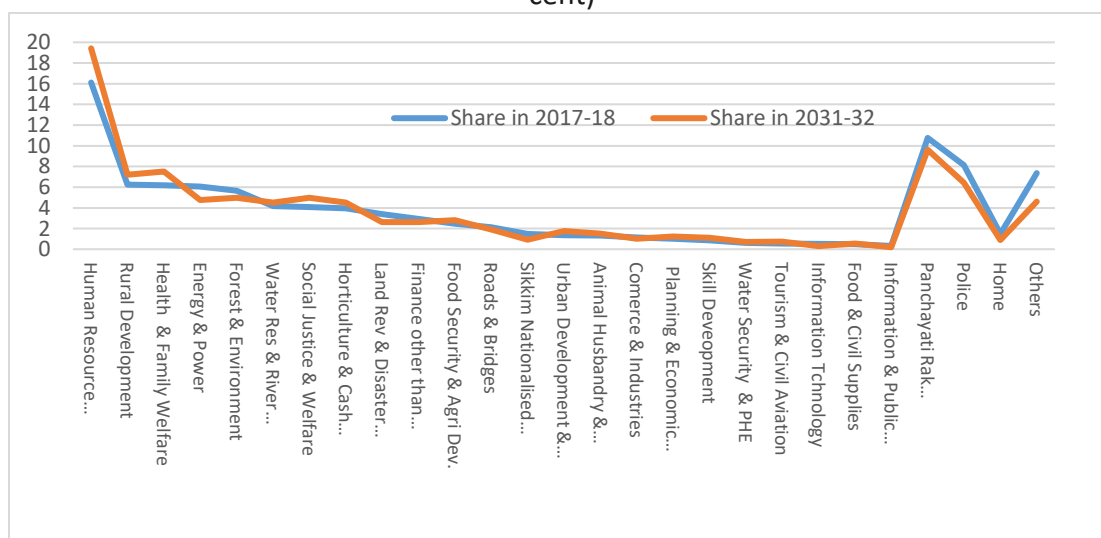
Particulars	2017-18	2020-21	2024-25	2029-30	2031-32	CAGR
Revenue Expenditure Net of Interest & Pensions	3812.0	5139.9	7782.6	13126.4	16167.3	10.9
Human Resource Development	614.2	859.1	1376.1	2479.7	3138.4	12.4
Rural Development	238.2	334.7	526.6	928.1	1164.2	12.0
Health & Family Welfare	235.2	331.9	531.7	958.2	1212.7	12.4
Energy & Power	230.6	298.7	421.6	648.7	770.8	9.0
Forest & Environment	215.9	282.1	413.0	665.2	804.9	9.9
Water Res & River Development	158.4	219.6	339.4	584.9	727.2	11.5
Social Justice & Welfare	155.9	220.0	352.4	635.0	803.7	12.4
Horticulture & Cash Crops	151.0	210.3	330.8	583.1	731.4	11.9
Land Rev & Disaster Management	129.0	164.0	231.5	356.3	423.3	8.9
Finance other than Interest & Pension	112.3	149.4	218.8	352.3	426.3	10.0
Food Security & Agriculture Development.	94.2	131.2	206.4	363.8	456.3	11.9
Roads & Bridges	81.6	108.6	158.9	256.0	309.7	10.0

⁹ The rate of growth of overall revenue expenditure and revenue expenditure net of interest and pension payments are assumed rates and their rationale is indicated in Chapter 3.

Sikkim Nationalised Transport	56.9	69.7	91.4	128.1	146.7	7.0
Urban Development & Housing	51.7	74.6	121.6	224.1	286.2	13.0
Animal Husbandry & Fisheries	50.8	70.7	111.2	196.1	245.9	11.9
Commerce & Industries	43.6	58.1	85.0	137.0	165.7	10.0
Planning & Economic Reforms	38.6	54.4	87.2	157.2	198.9	12.4
Skill Development	32.5	46.8	76.4	140.7	179.6	13.0
Water Security & PHE	23.7	33.3	52.4	92.4	115.9	12.0
Tourism & Civil Aviation	21.2	30.5	49.8	91.7	117.1	13.0
Food & Civil Supplies	19.1	25.9	40.8	71.8	90.1	11.7
Panchayati Raj Institutions	409.8	545.5	798.6	1286.2	1556.3	10.0
Police	310.4	401.9	567.3	872.9	1037.1	9.0
Home	56.6	69.4	90.9	127.5	146.0	7.0
Others	280.6	345.7	456.9	648.2	745.8	7.2

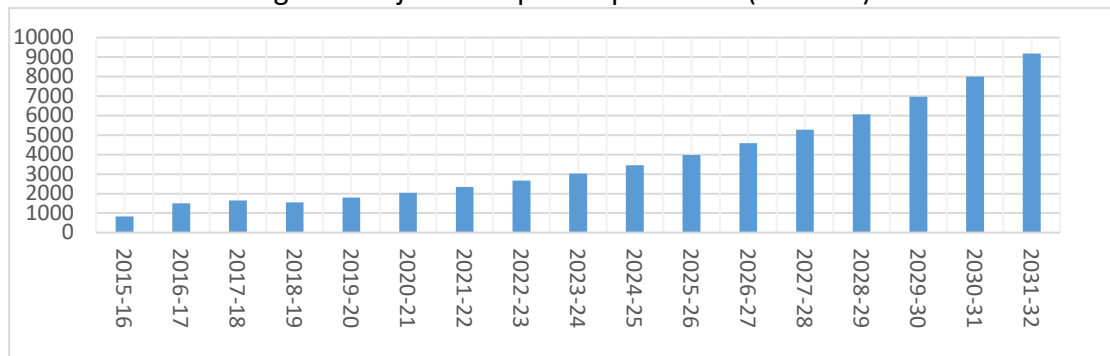
5.3 However, since a significant component of revenue expenditure consist of salary payments, some kind of committed expenditure in medium term, inter-se allocation cannot be drastically altered. Resource allocation, therefore, considers incremental re positioning approach, and relatively higher annual increase has been considered for the priority sectors/activities. While sectors with relatively less priority or the sectors which are non-developmental are projected grow at around 7 per cent annually, sectors like human resource development, rural and urban development, health & family welfare, tourism, skill development are expected to have an allocation, which increases annually by 12-13 per cent, a growth rate which is nearly 80 per cent higher than other sectors. While projecting resources for different demand for grants, salary and non salary component has implicitly been taken into consideration, the overall share of allocation for different demand for grants (Fig 5.2), however, remains largely sticky.

Fig 5.2: Share of Expenditure for Demand for Grants in 2017-18 and 2031-32 (per cent)



5.4 In post FRBM period, capital expenditure have largely been the residual expenditure, to the extent permitted by revenue surplus and the fiscal deficit limits. The Report of the Committee on Fiscal Reforms has suggested adherence to twin targets of fiscal deficit and a ratio of fiscal liabilities to GDP, which again sets a limit for the capital expenditure. But, a lower growth of revenue expenditure relative to the growth of revenue receipts, has made it possible to get a higher allocation for capital expenditure, which is projected to grow at 13.1 per cent annually compared to a growth of 10.9 per cent for revenue expenditure net of interest and pension payments. Overall capital expenditure is projected to increase from Rs 1639 crore in 2017-18 (BE) to Rs 9184 crore in 2031-32 (Fig 5.2).

Fig 5.2: Projected Capital Expenditure (Rs crore)



5.5 Unlike revenue expenditure, the rate of growth of capital expenditure for different Demand for Grants has generally converged to the mean growth. There are two reasons for assuming a more or less uniform growth for capital expenditure across the demand for grants. Firstly, overall share of capital expenditure to total expenditure at 24 per cent has not been very high. Further, in terms of the need for investment in infrastructure, civic amenities and human resource development significantly exceeds the current allocation of resources that the overall availability of resources permits. Second, inter-se priorities of different sectors is also not significantly different (Table 5.2). Annual allocation proposed for different demand for grants, however, could be considered as tentative and higher allocation in some years could be considered based on progress of the projects/activities.

Table 5.2: Allocation of Resources (Capital Expenditure) Selected Years (Rs Crore)

Particulars	2017-18	2020-21	2024-25	2029-30	2031-32	CAGR
Capital Expenditure	1639.4	2045.2	3452.9	6973.8	9184.0	13.1
Finance	328.2	423.2	740.2	1488.8	1968.9	13.7
Rural Development	230.1	284.3	490.8	983.0	1300.0	13.2
Roads & Bridges	206.1	251.3	433.8	868.7	1148.8	13.1
Health & Family Welfare	128.8	152.1	266.0	535.0	707.6	12.9
Water Security & PHE	119.5	145.5	254.4	511.8	676.8	13.2
Energy & Power	118.7	145.5	251.1	502.9	665.1	13.1
Tourism & Civil Aviation	96.9	132.3	231.3	465.2	615.3	14.1
Urban Development & Housing	95.0	119.0	202.8	390.5	507.4	12.7
Social Justice & Welfare	53.9	66.1	115.7	232.6	307.6	13.2

Land Rev & Disaster Management	50.5	66.1	115.7	232.6	307.6	13.8
Planning & Economic Reforms	38.5	52.9	92.5	186.1	246.1	14.2
Skill Development	37.1	49.4	72.3	116.4	140.8	10.0
Human Resource Development	32.2	39.7	69.4	139.6	184.6	13.3
Building & Housing	22.1	25.1	39.5	69.6	87.3	10.3
Others	81.7	76.4	113.1	185.4	226.3	7.5

5.6 The projections for revenue and capital expenditure as has been made are consistent with the FRBM targets and their likely path over time. These have, however, been considerably influenced by our assessment of the resource availability. A higher buoyancy of receipts from the State's own taxes and other sources and grater flow of resources from the Union would permit increased allocation for the priority sectors. Resource availability at the aggregate level of the State is heavily dependent on transfers from the Union, which are governed to a large extent by the recommendation of the Finance Commission. The tax base of the State is also small and the sources for non-tax revenue are also not diversified. While some structural shift in the economy is already underway, their impact on resource availability is likely to be moderate. But, the allocation proposed for revenue and capital expenditure attempts to align that to the SDGs and a significantly higher allocation to sectors impinging on SDG outcomes has been considered.

Chapter 6: Goal 1- End Poverty in all its forms

Eradication of poverty is the first goal for sustainable development. The long term vision under this goal is to completely eradicate extreme poverty everywhere and for everyone and reduce by half the deprivation measured in terms of health, education and standards of living or the Multi-Dimensional Poverty (MDP). It considers two instruments, the first one is to ensure that all persons, particularly the vulnerable and marginalised ones have equal rights to economic resources and the basic services. The second instrument is insulate them from extreme events, arising from climatic changes, disasters and economic factors. To achieve the objectives of this SDG, the Government should raise enough resources and allocate them to the activities and sectors which would facilitate achievement of this objective.

6.2 Poverty levels in Sikkim have considerably come down and compared to the national average of 21.9 per cent people below poverty line, this ratio is just a little over 8 per cent (Table 6.1). The decline in head count poverty ratio at 23 percentage points (between 2004-2012) is equally impressive. The goal post target of ending poverty defined in this way is, therefore, proposed to be achieved with in first three years, or first phase of SDG implementation. The poverty gap ratio, which reflects the extent to which average consumption of the poor falls below the established poverty line, indicating the depth of poverty was relatively low for Sikkim. In 2011–12, Sikkim reported a rural poverty gap ratio of 0.96, as against the national average of 5, and is next only to Goa. Urban poverty gap ratio of 0.45, as against the national average of 2.3 during 2011-12 was the lowest.

Table 6.1: Poverty Ratio- Based on Mixed Recall Period of Consumption (Person in Millions)						
	2004-05		2009-10		2011-12	
	No. of Persons	Percentage	No. of Persons	Percentage	No. of Persons	Percentage
Sikkim	0.18	31.10	0.08	13.10	0.05	8.19
ALL INDIA	407.61	37.20	354.68	29.80	269.78	21.92

6.3 The philosophy behind the inception of this SDG is, however, to extend the millennium development goal targets based on minimum needs or basic needs approach of poverty defined as head count ratio or poverty gap ratio to Capabilities Approach or Entitlements Approach. The basic objective is to inculcate inter-generational entitlements and reduce intra household disparities. SDG-1 aims to end poverty from everywhere in all its forms which includes economic, social, gender-based and all other forms of deprivation in income, education, nutrition, health, access to water and sanitation, and vulnerability to economic shocks or the multi dimension poverty (MPI).

6.4 MPI identifies multiple deprivations and recognises poverty from different dimensions. MPI uses three dimensions and 10 indicators. The dimensions and indicators used are: Education- years of schooling and child enrollment (1/6

weightage each, total 2/6); Health- child mortality and nutrition (1/6 weightage each, total 2/6); and Standards of living- electricity, flooring, drinking water, sanitation, cooking fuel and assets (1/18 weightage each, total 2/6). Overall MPI of Sikkim at 0.150 is certainly lower than the national average of 0.283, but above the level that prevails in Kerala, Goa and Delhi (Table 4.2). Further, percentage of people who are vulnerable to poverty in Sikkim at 31.8 per cent is close to national average. The value of MPI and its various parameters for Sikkim and some selected States in India are summarized in table 6.2.

Table 6.2: Multidimensional Poverty across Indian States, 2005–06

		Multidimensional Poverty Index (MPI)	Incidence of Poverty Headcount Ratio	Intensity of Deprivation among poor	Percentage of population vulnerable to Poverty	Percentage of population in severe poverty
1	Kerala	0.051	12.7	40.2	22.3	2.1
2	Delhi	0.054	12.4	43.5	13.6	3.4
3	Goa	0.085	20.0	42.8	16.5	4.8
4	Sikkim	0.150	31.8	47.0	16.5	12.1
5	INDIA	0.283	53.7	52.7	16.4	28.6

Source: Oxford Poverty and Human Development Initiative, 2005–06.

6.5 Of the three components, the living standard contributes over 40 per cent to the low score of Sikkim (Table 6.3), but education and health are equally important. The biggest contribution to relatively low MPI value has been the improvements in health and nutrition. Sikkim features as the ‘best’ in terms of the lowest levels of deprivation attributable to health and nutrition. Equally significant is the progress that Sikkim has made in providing improved sanitation.

Table: 6.3 Multidimensional Poverty Index (MPI): Percentage Contribution to Deprivations

		MPI	Education	Health	Overall Living Standard
1	Sikkim	0.150	35.9	22.7	41.5
2	Assam	0.316	18.7	32.1	49.2
4	Goa	0.085	19.0	38.2	42.8
5	Delhi	0.054	31.6	42.4	26.0
6	Kerala	0.051	12.0	43.8	44.2

Source: Oxford Poverty and Human Development Initiative, 2005–06.

Targets

Table 6.4: End poverty in all its forms everywhere		
3 years	7 years	15 years
Bring the overall poverty as measured in terms person below poverty line to zero.	Bring down the MPI by half or to a level of 0.8 in seven years	Bring down the MPI to a level of 0.05 or below with in 15 years.

Bring down the poverty gap ratio in Rural areas to 0.75	Bring down the poverty gap ratio in Rural areas to 0.50	Bring down both urban and rural poverty gap ratio to 0.35
Bring the urban poverty gap ratio further to 0.4 or even lower		

6.6 The time frame for the goals under poverty elimination are indicated in Table 6.4.

Strategy and Programmes

6.7 The strategy for poverty alleviation has gone beyond the basic needs approach and also beyond the social protection measures which covered public provisioning of goods and services. Current strategy include free or subsidised provision for food and nutrition security, public utilities covering basic education, health, water supply and sanitation and access to energy and guarantee for wage employment for some specified days. Poverty reduction strategies, therefore, consider income support and empowerment covering health and education. With in income support, three instruments are proposed to be used. First/ the enabling environment which offers better opportunities for self employment and wage employment; second, which provides access to state operated employment programmes guaranteeing employment for a minimum number of days; and thirdly, which provides income support to such persons who are not able to work, such as old age pension, etc. Government of Sikkim operates on all these fronts.

6.8 MGNREGA has been a key instrument to combat poverty. It could be seen as a social security intervention for a minimum sustenance level in rural areas. The scheme has been able to put money in the hands of the poorest of the poor. The report card of MGNREGA is summarized in table 6.5. In last four years, an expenditure of over Rs 400 crore was incurred on this employment guarantee programme, which generated 157 lakh person days of work. MGNREGA provided on an average wage employment to nearly 80,000 persons, about a quarter of the total persons in age group of above 15 years. Besides providing income through employment, MGNREGA created a multiplier effect in stimulating the rural economy. MGNREGA is increasingly becoming a lifeline of the rural women in the State. It is able to dignify labour work in the villages, and provided purchasing power and bargaining power to the rural households which reflected in an increase in rural wages. MGNREGA wages have also kept pace with inflation and have increased by over 25 per cent in last four years.

Table 6.5 : Progress Report of MGNREGA

	2016-17	2015-16	2014-15	2013-14
Individual Workers worked (Lakhs)	0.83	0.81	0.68	0.79
Person days of work generated (lakhs)	46.12	43.84	24.12	43.28
Central Fund Release (Rs Lakhs)	13263	8623	7386	10684

Total Expenditure (Rs Lakhs)	13747	9585	7643	10889
Wage Rate (Rs)	174	169	156	136
Average cost per person (Rs)	285	255	319	240
Completed Works	1800	2672	2072	1770

Source: Ministry of Rural Development- Report on Sikkim

6.9 MGNREGA would continue to be an important instrument of income support for two reasons. Firstly, the number of persons in age group 10-50 during 2011-12 were reported to be constituting 71 per cent of total male population and 73 per cent of the total female population¹⁰ and that is a proxy for the requirements. Second, the distribution of workers clearly indicated predominance of self employed (many of whom may be underemployed and seek supplementary wage employment) and casual workers (Table 6.6).

Table 6.6: Distribution of Workers in terms nature of job (per 000)

Particulars	Male			Female		
	Self Employed	Regular Wage Employed	Casual Workers	Self Employed	Regular Wage Employed	Casual Workers
Bihar	536	55	409	427	83	491
Kerala	382	198	420	364	286	349
Sikkim	638	300	62	856	117	27
Delhi	358	605	37	209	771	20
all-India	507	198	294	561	127	312

Source: NSSO- Employment and Unemployment Survey, 2011-12

6.10 Besides MGNREGA, other programmes, which run concurrently in education and health sector will contribute to reduction in multi-dimensional poverty. State also operates an old age pension scheme which covers all persons above a specified age. These interventions and initiatives are discussed separately as these overlap with other SDGs.

6.11 The programme like MGNREGA have ultimate to culminate in creation of assets and infrastructure which can sustain the economy and create enough opportunities for income generation either by way of regular wage employment or self-employment. To this objective, it has been linked with the livelihood opportunities and capability improvement. These transfers have already been linked through Aadhar to ensure that the benefits accrue to those who are entitled for it.

6.12 But the transaction costs in such programmes are usually high, both in the form of administrative costs and higher costs for the assets and infrastructure created through it. Over time, one can consider conditional cash transfers (CCTs) or to a comprehensive basic minimum income support scheme which would consolidate the independent initiatives of employment and income support. CCTs were first implemented in Brazil in 1980s and the transfer of cash was on the condition that they send their children to school and take care of their health. Cash transfers impact poverty directly and allows them the freedom to use it as they consider it appropriate.

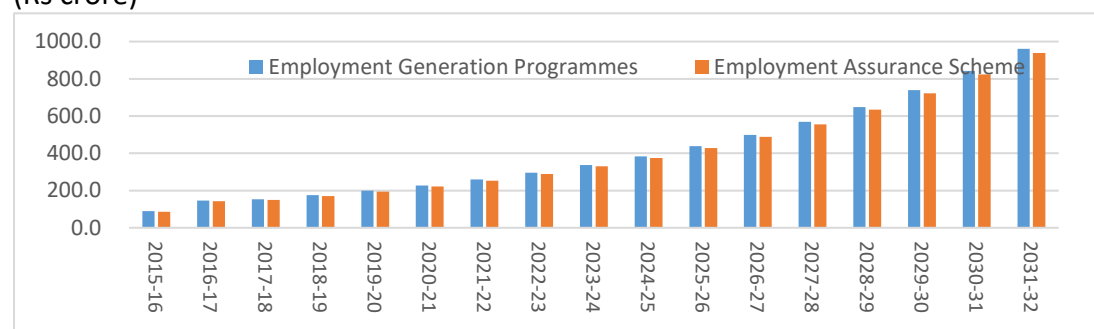
¹⁰ National Sample Survey Organisation- Employment & Unemployment Survey 2011-12

It also permits them to pursue an economic activity and does not distort the incentive mechanism. It also makes it possible to have a proper inclusion and exclusion or a better targeting of the transfers. The universal basic minimum income to all households, which could be indexed to take the inflation and equality issues, would eradicate poverty, both in terms of pure subsistence and as multi dimensional level.

Resources Required

6.13 In our assessment of resource needs for poverty alleviation under this SDG, we have considered only the resources required for employment generation programmes in rural and urban areas. In the event of a shift to cash transfers or a support for a defined level of basic income, such resources could be earmarked for such interventions. An overall allocation considered is Rs 960 crore in 2031-32, from its current level of Rs. 153 crore, increasing annually at 14 per cent.

Fig 6.1: Overall allocation for Income Support /Employment Guarantee Programmes (Rs crore)



6.14 At the current level of beneficiaries at around 80,000, the current allocation for rural and urban employment programmes envisages a per capita transfer of around Rs. 20,000. Assuming that the beneficiaries increase annually by 2 per cent, these transfers would provide an implicit support in the terminal year of Rs. 91,000, or to put it differently, it would amount to an income support to each BPL household of Rs. 4 lakhs.

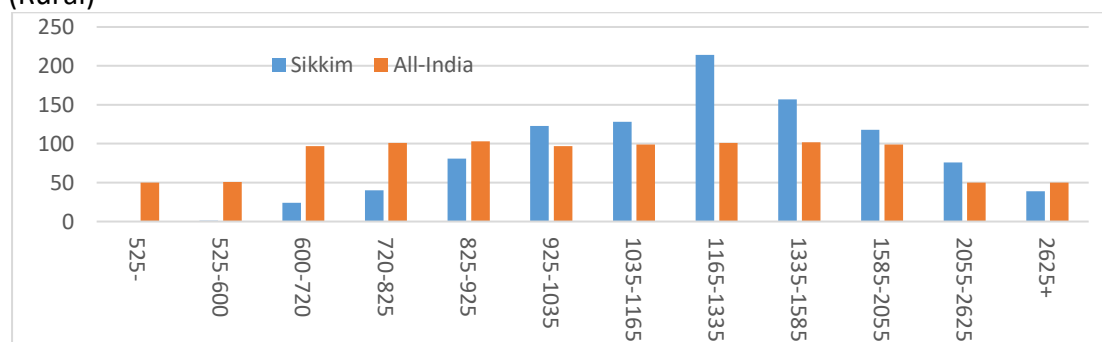
Chapter 7: Goal 2- End Hunger

The sustainable development goal concerning 'end hunger' is a qualitative extension of the earlier goal of eradicating poverty. This goal envisages to ensure access by all people safe, nutritious and sufficient food throughout the year and eliminate all forms of malnutrition, particularly for adolescent girls, pregnant & lactating women, children and old persons. The instruments for achieving this goal is by increasing production and productivity in agricultural and horticulture, increase investment in food delivery, its procurement, storage and distribution, reduce food wastage and proper functioning of food commodity markets, which while being non-distortionary, ensure fair prices to producers and these being affordable to consumers.

7.2 Sikkim has had no incidence of death due to starvation and minimum required food availability has not been an issue. Further, Government of Sikkim has enacted the Food Security legislation (NFSA) which mandates it to ensure availability and access of food to all its residents. The goal 'End Hunger' has two components. The first component is providing a level of income or purchasing power to each individual, schemes relating to that has already been indicated in Goal 1 above and the second, the institutional mechanism which ensures availability and access to food items, availability and access encompassing both the quality and prices.

7.3 Not only there have no cases of starvation, consumption expenditure in both rural and urban areas in Sikkim is more evenly distributed. In 2011-12, nearly 75 per cent of the total rural population of Sikkim had a monthly per capita expenditure in the range of Rs. 925-2055, compared to around 50 per cent for the country as a whole, with median level of consumption close to Rs. 1200 (Fig 7.1).

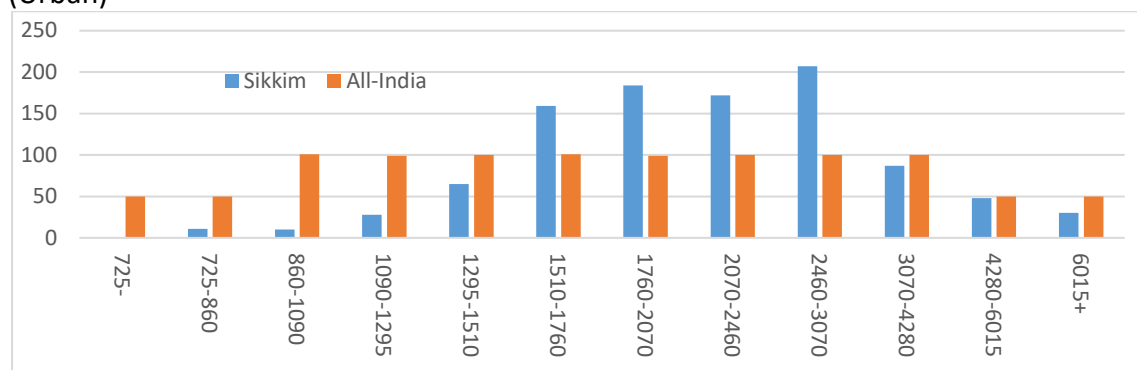
Fig 7.1: Number of persons (out of 000) as per Monthly Consumption Expenditure (Rural)



Source: NSSO- Key Indicators of Consumption- 2011-12

7.4 Even in urban areas, 70 per cent of the population were in the consumption bracket of Rs. 1510-3070, as against an all India level of just 40 per cent (Fig 7.2).

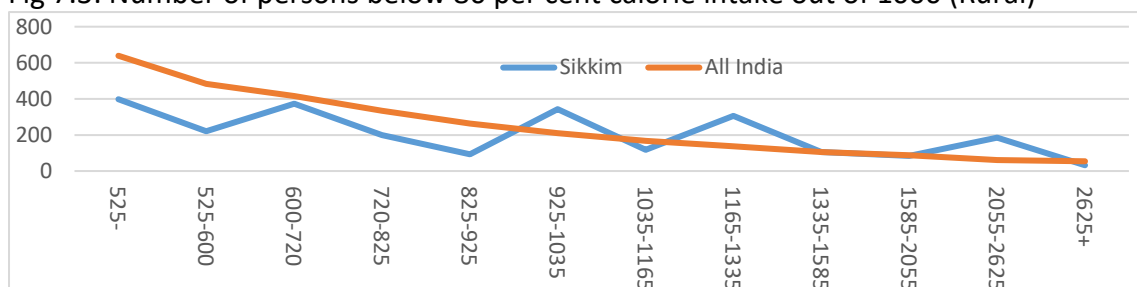
Fig 7.2: Number of persons (out Of 000) as per Monthly Consumption Expenditure (Urban)



Source: NSSO- Key Indicators of Consumption- 2011-12

7.5 Even though the majority of the population had a relatively higher consumption expenditure the number of persons below 80 per cent of the defined calorie levels were 20 per cent of the population as against 23 per cent at the national level. Calories intake of less than 80 per cent of the norm was prevalent across all consumption expenditure categories and there was an absence of a secular declining trend as was observed at the national level (Fig 7.3).

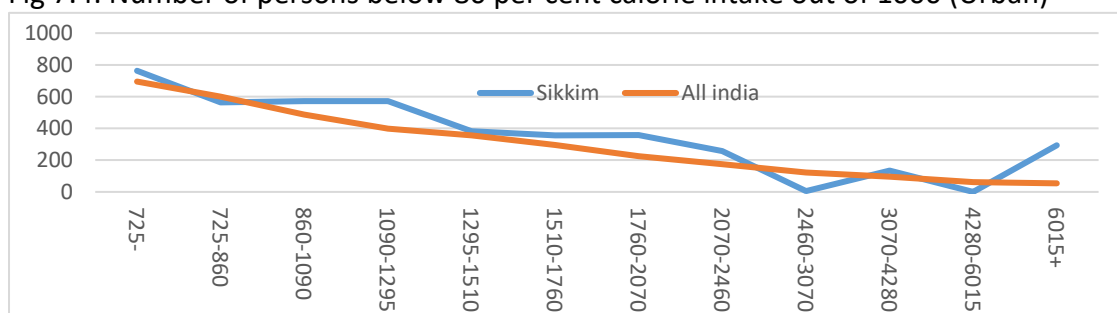
Fig 7.3: Number of persons below 80 per cent calorie intake out of 1000 (Rural)



Source: NSSO- Key Indicators of Consumption- 2011-12

7.6 The undernourishment was more in urban areas and on an average 34 per cent of the people reported a calorie intake of less than 80 per cent of the specified norm. These numbers were higher than the national average of 28.6 per cent. As in the case of rural areas, lower intake of calories was prevalent across all consumption expenditure classes (Fig 7.4)

Fig 7.4: Number of persons below 80 per cent calorie intake out of 1000 (Urban)



Source: NSSO- Key Indicators of Consumption- 2011-12

7.7 Using the anthropometric measure, percentage of persons who were stunted, underweight and wasted¹¹, there appears deterioration, with a somewhat upward trend (Table 7.1) in case stunted and wasted persons. The outcome has been similar to that which has been observed for the country as a whole, though the levels are significantly lower for Sikkim.

Table 7.1: Anthropometric Measures by Sex (per cent)

	Sikkim				All India			
	1988-89		2005-06		1988-89		2005-06	
	Male	Female	Male	Female	Male	Female	Male	Female
Stunted	30.9	32.6	40.6	35.9	44.1	47.0	48.1	48.0
Underweight	19.0	22.2	19.2	20.1	45.3	48.9	41.9	43.1
Wasted	5.0	4.6	9.9	9.5	15.7	15.2	20.5	19.1

Source: Rajeev Malhotra- India Public Policy Report, 2014

Targets

Table 7.2 provides the time frame and targets under this goal.

Table 7.2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture		
3 YEARS	7 YEARS	15 YEARS
The cases of hunger have not been cited so far in the State of Sikkim. This status is to be maintained.	With the implementation of the NFSA, 2013, State is mandated to ensure that quality food in right quantity and at reasonable price is delivered at the doorstep of Fair Price Shops	Overall quantum of food losses will be reduced. Efforts will be made in a big way through awareness programmes to educate people about proper storage and to avoid food losses in all forms as grain saved is grain produced.

Schemes/Programmes

7.8 Public Distribution System is being implemented through the National Food Security Act, 2013 under which beneficiaries of specified schemes are provided subsidised rice. State is revamping its inspection mechanism and is also putting best effort to implement legal Weights and Measures Act, so that measurement is accurate and timely disposal of stocks are made before expiry date to provide quality assurance and also to minimise losses at different levels of distribution. Food waste and losses are currently estimated at around 5 per cent. The effort is to zero it down in next 15 years. Government is undertaking construction of new godowns which have modern scientific methods of food preservation and converting the godowns constructed earlier so that they meet the storage standards.

¹¹Underweight is assessed by weight for age, stunting assessed by height for age and wasting assessed by weight for height.

7.9 There are four types of food and nutrition insecurities; chronic food insecurity due to prolonged period of energy deficit; nutritional food insecurity caused by the deficiency of micro-nutrients; absorption food insecurity caused by poor sanitation and poor availability of potable water; and transient food deficiency caused by natural calamities or temporary less availability of nutritional food¹². These insecurities could get accelerated with poor supply and distribution network and inadequate quality controls.

7.10 State is currently providing supplementary food in the form of Poshak Aahar to children below 5 years @ 140 grams /day/child and pregnant and lactating mother 2170 grams/day/beneficiary. Even identified severely underweight children are provided with special supplementary food @80 grams/day/child in addition to the supplementary food. New initiatives under its overall nutrition programme include: Fortification of essential food items with appropriate nutrients; Popularisation of low cost nutrient food prepared from locally available raw materials; Creating mass awareness among general population about importance of food and nutrition; and Imparting basic health and nutrition knowledge.

7.11 State has been working towards reducing malnutrition by providing milk @ 200 ml/day/child as morning snack and hot cooked meal (khichari) @155 grams and dry fruits/kheer @155 grams once a week to AWC children and special supplementary food to identified underweight children. State is putting up campaigns to promote consumption of iron rich food and distribution of iron folate through AWWs of various areas. Some of the critical interventions include: Immunization of vitamin A dose, which is available at health care services; Iodine deficiency is tackled by creating awareness and people are encouraged to use only iodized salt; Pregnant women, beside being provided with counseling, are provided with supplementary food in addition to their regular meal. Other programmes and interventions considered are- preventing food adulteration, periodic and comprehensive surveillance through adequate sample survey; promotion of kitchen garden; setting up of rehabilitation centres for malnourished children; and promotion of household food security.

7.12 Under promotion of optimal infant and young child feeding practices, awareness programme is organised. Under new interventions, a counseling centre is proposed for pregnant women and adolescent girls for early initiation of breast feeding with in 1 hour of birth till 6 months to be continued for 2 years of age, establishment of baby and mother friendly centres at around work places to promote exclusive breast feeding, protecting the breast feeding mothers by modifying laws appropriately, and consumption of safe locally produced complementary food.

7.13 Currently supplementary food is prepared on monthly basis at Extruder Food Processing Plant, it needs modernisation and new technique. Establishment of food nutrition laboratory for assessing quality is required along with an improved distribution system.

¹²Shariff, A., Ghosh, P., and Sharma, A., 2004. Food and Nutritional Status of the Poor in India- A State level Analysis

7.14 In Sikkim, 61 per cent and 55 per cent of calorie intake and protein intake, respectively, in rural areas is through cereals. Milk and animal products are a source of protein, but these together accounts for around 25 per cent of total protein intake. In urban areas also, 51 per cent and 47 per cent of calorie intake and protein intake, respectively is through cereals. Milk and animal products even in urban areas provide only 25 per cent of protein intake¹³. Government of Sikkim has, therefore, proposed a comprehensive programme of improving availability of milk and animal products in next 15 years (Table 7.3).

Table 7.3: Target by Animal Husbandry Department for Milk & animal Products

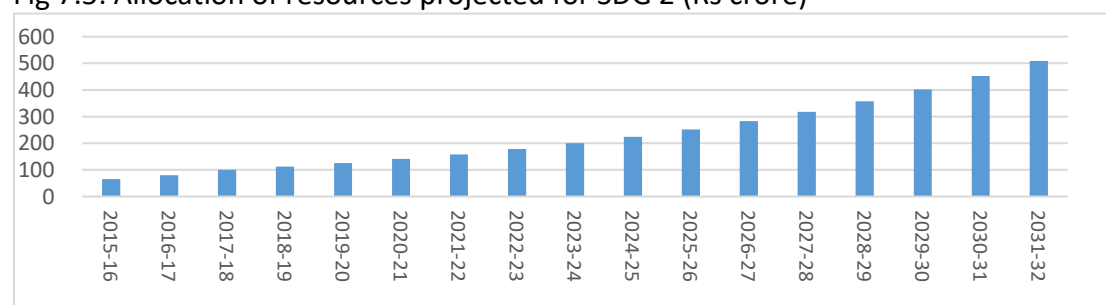
	2016-17	2019-20	2024-25	2029-30	CAGR
Milk (MT)	65	85	122	140	6.1
Poultry Meat-Broilers (MT)	3500	6000	8500	12000	9.9
Poultry Meat Desi (MT)	220	300	500	750	9.9
Meat-Mutton (MT)	1300	1700	2700	5000	10.9
Pork (MT)	300	450	750	1400	12.6
Egg (lakh numbers)	175	220	350	600	9.9

Resources

7.15 There are multiple areas of intervention to achieve the targets under this goal and that encompasses the policies and programmes for increasing availability of food and other non-food products. Many of these are covered in other goals of increasing production and productivity, water supply & sanitation and capital works relating to construction of godowns, testing labs and others. Resources of revenue nature under this goal considered are, therefore, confined to food subsidy and nutrition (including under Food Security Act), Integrated Child Development Programme, Pension and other family support schemes providing purchasing power and the expenditure on process improvement and computerisation.

7.16 Total resources for this SDG are projected at Rs 70 crore in 2015-16 to Rs 509 crore in 2031-32 at an annual rate of 12.3 per cent (Fig 7.5)

Fig 7.5: Allocation of resources projected for SDG 2 (Rs crore)



¹³ National Sample Survey Organisation- Survey of Consumption Expenditure 2011-12

7.17 Inter-se allocation for different categories of intervention is indicated in table 7.4. While the allocation for ICDS/ICPS and mid day meal is the highest, allocation for food security & nutrition and for pension & family support is also projected to increase significantly. Resources have been provided for computerisation and process improvement so that there is minimum leakage and resources flow to the targeted population

Table 7.4: Allocation for Different Group of Interventions under SDG 2 (Rs crore)

Year	Food Subsidy & Nutrition	ICDS/ICPS	Pensions & Family Support	Process Improvement
2015-16	17.1	18.7	28.2	1.1
2016-17	18.0	29.4	31.3	1.3
2017-18	23.0	42.0	33.1	2.0
2018-19	26.1	47.3	36.6	2.2
2019-20	29.6	53.4	40.4	2.4
2020-21	33.6	60.2	44.7	2.7
2021-22	38.2	67.9	49.4	3.0
2022-23	43.4	76.6	54.6	3.3
2023-24	49.3	86.4	60.4	3.6
2024-25	56.1	97.5	66.8	4.0
2025-26	63.7	109.9	74.0	4.5
2026-27	72.4	124.0	81.8	4.9
2027-28	82.3	139.9	90.6	5.5
2028-29	93.6	157.9	100.3	6.0
2029-30	106.4	178.1	111.0	6.7
2030-31	121.0	201.0	123.0	7.4
2031-32	137.6	226.8	136.2	8.2

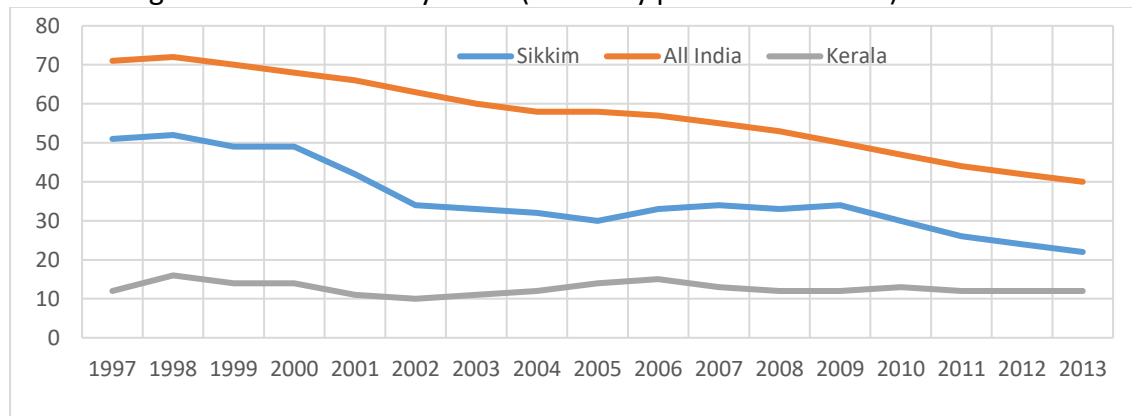
7.15 As indicated earlier this allocation is for specific intervention under this goal and cover only revenue expenditure. Capital expenditure for all Demand for Grants has already been indicated in Chapter 5. National Food Security Act, 2013 aims to provide food and nutrition security to the beneficiaries identified by the State. The process of identification has already been completed and required provisioning of foodgrains is being met. The resources projected takes care of inflation, coverage and ensures adequacy of foodgrains.

Chapter 8: Goal 3- Good Health & Well being

The sustainable goal relating to good health and well being is equally comprehensive and sets a target of reducing the maternal mortality to 70 per 100,000 live births and neonatal mortality to 12 per 1000 live births. It also envisages reducing the death due to epidemics of AIDS, tuberculosis, malaria, water born diseases and strengthens the preventive care mechanism, universal health coverage together with an institutional mechanism which can make such treatment affordable to each individual through insurance, public provisioning and other initiatives. The instruments for this SDG are institutional set up of health centres and specialty hospitals, research & development of medicines and delivery mechanism, human resource development and awareness campaigns educating persons about the precautions and the facilities that are being made available.

8.2 Sikkim is very well placed in terms of the key health indicators of life expectancy, infant mortality and birth and death rates. Fig 8.1 and table 8.1 clearly indicate that the levels in health indicators of Sikkim are better than national averages, but these are still below the best that prevails in India. In terms of infant mortality (Fig 8.1) Sikkim had a better record historically. It has been able to further reduce the mortality rates, generally in line with a decline at national level. But infant mortality rate in State at 22 in 2013 are well above the level of 12 that is observed for Kerala.

Fig 8.1: Infant Mortality Rates (mortality per 1000 of births)



Source: State Tables, Reserve Bank of India, 2016

8.3 In terms of both the birth and death rates (Table 8.1), Sikkim has significantly improved its status with a rank higher than Kerala. This position the State has continued to sustain.

Table 8.1 Birth and Death Rates (per thousand of population)

States	1990	1995	2000	2005	2010	2011	2012	2013
Birth Rate								
Goa	15.8	14.7	14.3	14.8	13.2	13.3	13.1	13.0
Kerala	19.6	18.0	17.9	15.0	14.8	15.2	14.9	14.7
Sikkim	26.3	22.5	21.8	19.9	17.8	17.6	17.2	17.1
ALL INDIA	30.2	28.3	25.8	23.8	22.1	21.8	21.6	21.2

Death Rate								
States	1990	1995	2000	2005	2010	2011	2012	2013
Goa	6.9	7.5	7.4	7.1	6.6	6.7	6.6	6.6
Kerala	6.0	6.0	6.4	6.4	7.0	7.0	6.9	6.9
Sikkim	7.3	6.9	5.7	5.1	5.6	5.6	5.4	5.2
ALL INDIA	9.7	9.0	8.5	7.6	7.2	7.1	7.0	7.0

Source: State Tables, Reserve Bank of India, 2016

8.4 Another indicator of good health and well being could be per capita expenditure on health by individuals. The data from NSSO indicate that per capita expenditure of persons on health, both institutional and non-institutional is relatively low. In both rural and urban areas, the private expenditure on health care was just around 1 per cent of average per capita monthly expenditure as against a national average of 6.9 per cent and 5.5 per cent, respectively for rural and urban areas. It could partly be due to better availability, relatively to other States, of the state infrastructure, but it nonetheless indicate the need for better facilities as it could also be partly due to limited availability of health care facilities at critical levels, both with in the Government and in the private sector (Table 8.2).

Table 8.2: Monthly Health Expenditure (per Capita) In Rupees in 2011-12

States	Medical (Institutional)	Medical (Non Institutional)	Medical Expenses as % of Total Expenses	Medical (Institutional)	Medical (Non Institutional)	Medical Expenses as % of Total Expenses
	Rural Areas			Urban Areas		
Assam	2.8	25.5	2.7	7.5	61.9	3.4
Delhi	0.5	63.2	2.7	14.6	86.7	3.5
Kerala	96.7	148.1	9.8	63.1	162.4	7.4
Sikkim	3.6	11.9	1.1	0.0	24.3	1.0
all India	23.2	64.5	6.9	33.1	98.9	5.5

Source: NSSO: Consumption Expenditure Survey 2011-12

8.5 National sample Survey Organisation in January-June, 2014 had conducted a survey on issues relating to health sector. During the survey period of 15 days, survey collected the information on ailments that were reported by rural and urban persons according to their age groups. Survey revealed that only 34 cases of ailments in rural areas and 67 cases of ailments in urban areas were reported in Sikkim as against a national average of 89 ailments in rural areas and 118 ailments in urban areas. Ailments reported in different age groups indicate the ailments reported in urban areas for persons in age group 60+ were relatively high in Sikkim (Table 8.3).

Table 8.3: Number of ailments reported per thousand persons (PAP) during the 15 days

Particulars	0-14	15-29	30-44	45-59	60-69	70+	60+	all
Rural areas								
Sikkim	6	47	30	21	114	153	124	34
All India	67	46	77	135	259	306	276	89
Urban Areas								
Sikkim	10	31	73	68	453	865	598	67
all	81	48	98	206	355	373	362	118

Source- NSSO Report on Health (574)- January-June 2014

8.6 The cases of number of persons hospitalised for different ailments were also less in Sikkim in both rural and urban areas (Table 8.4). Comparative picture of different ailments also indicate a better position for Sikkim. The ratio of hospitalised cases for female relative to male at 2 in rural areas and 1.6 in urban areas (giving an overall ratio of 1.9), was, however, significantly higher in Sikkim compared to a national average ratio of 1.1. The incidence of ailments and hospitalisation seems to be greater in Sikkim. The incidence of hospitalisation for female was significantly higher in neurological ailments and the ailments relating to gastro-intestinal, where there were more than 5 female for each male patient. While it may be difficult to identify specific reasons for such a high proportion of female in such ailments relative to males, it does suggest the need for interventions which are better targeted. The two ailments where the number of males outnumbered females were eye/ear and cancer. At the national level, the females significantly outnumbered in ailments relating to nutritional deficiency. This, however, is on expected lines as first victim of inadequate availability is usually the female. Even in case of Sikkim, the ratio of females to males for nutrition related ailments was 1.5 and comparable with national average.

Table 8.4: Number of person hospitalised for major ailments (out of 100,000)

Particulars	Rural		Urban		All Sikkim		All India	
	Male	Female	Male	Female	Male	Female	Male	Female
Infections/Injuries	754	969	1177	1137	840	1000	1522	1167
Nutrition Related	47	41	62	215	50	74	78	124
Cancers	30	37	287	138	82	56	73	105
Neurological	17	70	0	75	14	71	230	218
Eye/Ear	27	9	107	0	43	8	159	219
Cardiovascular	86	171	68	127	82	162	363	316
Gastro-intestinal	97	541	91	596	96	551	382	439
Genitourinary	107	130	256	68	137	118	215	293
Others	181	703	269	1291	198	815	583	1029
Total	1346	2671	2317	3647	1542	2855	3605	3910

Source- NSSO Report on Health (574)- January-June 2014

8.7 However, notwithstanding fewer cases of ailments and hospitalisation in Sikkim relative to national average, hospital facilities in public sector, particularly in urban areas are hardly adequate. More than half of the total patients that were treated had to choose

private clinics/hospitals in Sikkim. However, HSC/PHC catered to nearly 88 per cent of patients in rural areas and together with public hospitals, their coverage was 96 per cent compared to a national average of under 30 per cent (Table 8.5). Private doctors, which had a dominant presence on an average in the country as a whole, had hardly any presence in Sikkim in rural areas. This indeed indicates a better presence and also better acceptance of public institutions for health care in Sikkim.

Table 8.5: Per thousand distribution of spells of ailment treated on medical advice over levels of care

Particulars	Rural			Urban			All areas		
	Male	Female	All	Male	Female	All	Male	Female	All
Sikkim									
HSC & PHC	813	909	876	0	0	0	487	628	576
Public Hospital	88	82	84	593	342	450	290	162	209
Private Doctor/Clinic	14	0	5	356	402	382	151	124	134
Private Hospital	86	10	35	50	257	168	72	86	81
All India									
HSC & PHC	106	123	115	35	42	39	79	90	85
Public Hospital	159	175	168	174	173	173	164	174	170
Private Doctor/Clinic	527	489	507	489	508	500	513	497	504
Private Hospital	208	213	210	302	277	288	243	239	241

Source- NSSO Report on Health (574)- January-June 2014

8.8 Preference for public hospitals and HSC/PHC in Sikkim resulted in a relatively lower expenditure for in patients. Average expenditure per in patient in rural areas was 55 per cent of the expenditure incurred at the national level. In urban areas also, this was less than 50 per cent (Table 8.6).

Table 8.6: Average medical expenditure for treatment (as inpatient) over last 365 days (Rupees)

States	Rural			Urban			All Areas		
	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
Bihar	12918	10124	11432	35363	15632	25004	15318	10699	12865
Delhi	16408	52043	30613	39322	28501	34730	38903	28888	34658
Kerala	24060	10815	17642	16931	14325	15465	21496	12340	16775
Sikkim	10860	6360	8035	11169	8942	9939	10954	6987	8543
All India	17528	12295	14935	28165	20754	24436	21223	15292	18268

Source- NSSO Report on Health (574)- January-June 2014

8.9 One of the sub targets under this SDG is to ensure that all deliveries of babies take place at institutional centres. However, as per the NSSO Health survey, even in Delhi 32.5 per cent and 14.2 per cent of births in rural and urban areas, respectively took place at home. In Sikkim 83.5 per cent and 72.9 per cent of the total births in rural and urban areas, respectively took place in public hospitals (Table 8.7). Average expenditure incurred on account of child birth was 44 per cent of the national average in rural areas and 34 per cent of national average in urban areas.

Table 8.7 : Places of Child Birth in 365 days of per 000 women and Average Expenditure (in Rupees)

States	HSC/PHC/ ANM	Public Hospital	Private Clinic	Private Hospital	Home	Average Expenditure
Rural Areas						
Delhi	0	543	0	132	325	2555
Kerala	32	280	42	591	54	13830
Sikkim	55	835	0	36	75	2446
All India	141	414	16	225	199	5544
Urban Areas						
Delhi	7	509	7	335	142	13886
Kerala	8	307	0	682	2	15346
Sikkim	0	729	0	216	55	3931
All India	33	384	17	458	105	11685

Source- NSSO Report on Health (574)- January-June 2014

8.10 Sikkim, however, suffers because of limited availability of insurance and other support products to cover medical expenses (table 8.8). There was virtually no coverage for expenditure support in Sikkim. Though the national average was 86 per cent persons as being not covered, this per cent was very low for Kerala.

Table 8.8: Per 000 distribution of persons by coverage of scheme of health expenditure support

States	Not Covered	Govt Support	Employer Arranged	Household & Insurance	Others	Total
Delhi	971	19	1	10	0	1000
Kerala	572	388	26	12	2	1000
Sikkim	999	1	0	0	0	1000
All-India	859	131	6	3	1	1000

Source- NSSO Report on Health (574)- January-June 2014

Targets

8.11 Targets under health and well being as envisaged in Sikkim are summarised in table 8.9.

Table 8.9: Targets for Health and General well Being

3 YEARS	7 YEARS	15 YEARS
Aim to fully end preventable deaths of newborns and children under 5 years of age	Maintain the level	By 2030, reduce maternal death to 7 (seven) in absolute numbers
Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	Institutional arraignments to be further strengthened to prevent such abuses	Aim to end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.
Reduce death due to Road traffic accidents by 50 per cent	Explore possibilities of further reduction in deaths due to road accidents	Bring the Road Safety Standards to the best in India
Substantially increase health financing and the recruitment, development, training and retention of the health workforce	Attempt to reach the best practices levels in training of health personal	Ensure universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable medicines and vaccines for all
Strengthen the capacity for early warning, risk reduction and management of health risks.	Create appropriate institutional set up based on assessment made	Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
	Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in Sikkim	Support the research and development of vaccines and medicines
		Strengthen the capacity for early warning, risk reduction and management of health risks

8.12 During the Twelfth Five Year Plan 2012-17, State undertook a number of initiatives in health sector. Some of the important initiatives are summarised below:

8.13 Primary Health Centres and Sub Centre (PHC/PHSC): The 12th Five Year Plan envisaged to establish one PHSC per Gram Panchayat Unit and increasing their number to 165 to cover all GPUs. Requirements until 2030, with the expected population growth is of 240 PHSCs. A new PHC is being established at Tsomgo to cater to the local population and extensive tourist traffic visiting the area. With increasing population and work-load and to implement various health programmes, 7 PHSCs were upgraded to PHCs. The Pakyong PHC is one of the busiest PHC in the East District located in the heart of the town, it is likely to be upgraded to CHC due to its strategic location vis-à-vis the upcoming airport. Keeping the above in view, relocation of the PHC in a new campus with adequate area and the existing structure to be used as training centre was considered. Total number of PHCs that may be required by 2032 is estimated to be 38 as against the existing strength of 24.

8.14 Community Health Centre (CHC): Operationalisation of existing CHC at Jorethang and Rhenock by providing qualified and trained human resource for constructing the Operation Theatre, Labour room and Blood Storage Centre, fully functional with all equipments and instruments etc. Upgradation of PHC to CHC: It is proposed to upgrade the Soreng PHC to CHC to meet the increasing health care need for the people living in the rural areas. Additional CHCs that are needed by 2030 is estimated to 10, raising the number of CHCs to 12 by that period.

8.15 District Hospitals: Relocation of District Hospital at Singtam has been considered. This hospital was constructed in 1979-80 with 100 beds capacity, however the population of Singtam and adjacent areas of East District has escalated rapidly due to increasing industrialization. Therefore, it is proposed to construct a new 150 bedded Hospital in the old hospital complex where there is almost 12 acres of land available. The present Hospital will be renovated and converted to Chest and Respiratory wing (100-bedded).

8.16 Disaster Management, Trauma & Emergency Centre with 50 bedded capacity for Mangan, Gyalshing & Namchi District Hospital have been proposed to meet any natural calamity as Sikkim is in Zone Five of Earthquake region. Construction of 575 bedded hospital at Suchakgang, Gangtok which was initiated on September 2010 has since become functional and under operation.

8.17 Human Resources: Lack of human resources is equally responsible for poor delivery of health services as lack of physical infrastructure. There is a general shortage of qualified trained health human resource at all level. This would be a priority area for the Government for achieving the goal posts set under this SDG. Expansion in teaching institutions, training facilities and provision for training within and outside the state is mandatory for filling up vacancies at all levels.

8.18 Birth & Death Cell: Computerisation of 32 Birth & Death Registration Centres & a database of archives of nearly 4 lakh individuals has been created. But the

requirement would need to be assessed on a continuous basis for any shortfall to be planned and covered.

8.19 Janani Suraksha Yojana (JSY) is being implemented to increase institutional deliveries. Through this scheme, free drugs, free diagnostics, referral transportation, free diet and free blood services are provided to pregnant mothers and infants. There is a maternal death review of every maternal death. First referral units and delivery points have been strengthened and a comprehensive abortion care has been introduced.

8.20 State is implementing Revised National TB Control Programme (RNTCP). Tuberculosis and respiratory diseases are a major problem in the State and in view of increasing rates of these diseases, the State is proposing construction of a 300 bedded chest and respiratory diseases hospital costing Rs 350 crore. The National Vector Borne Disease Programme (NVBDCP), an umbrella programme for prevention and control of Malaria, dengue, Filariasis, Kala Azar, Japanese Encephalitis and Chikungunya is under implementation. A programme of vaccination against Hepatitis B was launched in 2001 and is being continued. Sikkim has already achieved the goal of elimination of leprosy (prevalence rate of less than 1 case per 10,000 population). The National Programme for Prevention and Control of Cancer, Diabetes and Stroke (NPCDCS) is under implementation. Infection management & Environmental Plan (IMEP) and Bio medical Waste Management Programme are under implementation.

8.21 While Sikkim fares well in terms of basic health metrics, there are shortages in primary and secondary health-care infrastructure. Based on the current population of Sikkim, and Indian Public Health Standard (IPHS) guidelines issued by the Govt. of India, there is deficit of 220 beds at the CHC and PHC/PHSC level. If one were to take a longer term view, there will be need for 100 more beds basis incremental population till 2030. Tertiary care capacity in the state is also inadequate and 3 tertiary care hospitals have a total capacity of 860 beds. Moreover, the number of specialist doctors is not in line with disease incidence, especially for diarrhea and cardiovascular diseases¹⁴.

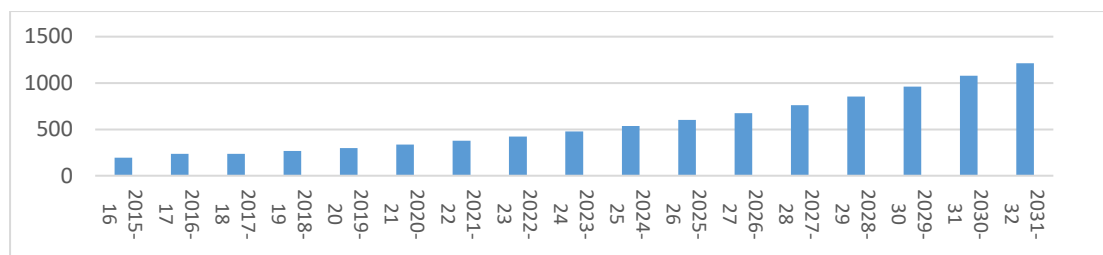
8.22 One of the targets envisages reduction of road accidents and deaths arising out of these accidents. While road re-carpeting and improving road network is being dealt with separately, it is necessary that there is a system of information and linking of such information to the network of health centres.

Resources required

8.23 Overall allocation of resources under this SDG is projected to increase from Rs 236 crore in 2017-18 (BE) to Rs. 1212 crore by 2031-32, increasing annually at 12.4 per cent (Fig. 8.2).

Fig 8.2: Overall allocation of resources under SDG of Health & Well-being

¹⁴ Report of the Boston Consulting Group



8.24 Allocation of resources for programmes under broad heads is summarised in table below.

Table 8.10: Allocation of Resources under broad Heads for Health & Well-being

Year	Urban Health support	Rural Health Support	Prevention & Control	Family Welfare & Maternity Benefits	Illness Assistance Fund & Training
2015-16	100.39	34.05	30.94	17.82	10.36
2016-17	110.01	42.83	43.90	25.24	12.53
2017-18	118.93	44.52	35.82	24.19	13.01
2018-19	134.05	50.00	40.41	27.16	14.13
2019-20	151.04	56.14	45.58	30.50	15.36
2020-21	170.14	63.05	51.43	34.26	16.72
2021-22	191.59	70.81	58.02	38.47	18.26
2022-23	215.72	79.51	65.46	43.20	19.94
2023-24	242.85	89.29	73.86	48.51	21.80
2024-25	273.34	100.28	83.34	54.48	23.86
2025-26	307.62	112.61	94.03	61.18	26.14
2026-27	346.14	126.46	106.11	68.71	28.67
2027-28	389.43	142.02	119.74	77.16	31.48
2028-29	438.09	159.49	135.12	86.65	34.59
2029-30	492.78	179.10	152.49	97.31	38.05
2030-31	554.23	201.13	172.10	109.28	41.88
2031-32	623.30	225.87	194.23	122.72	46.13

8.25 BCG has suggested capital expenditure of Rs. 1343 crore in health care sector as detailed in table 8.11 below, though these have not been considered in the current allocation, which is confined to revenue expenditure. Overall availability of funds for capital expenditure purposes and its allocation inter-se for demand for grants has separately been provided.

Table 8.11: Capital Expenditure for the Health care sector (Rs Crore)

No.	Initiative	Details	Funding required
Primary and secondary health care			
1	Capacity addition (+330 beds)	<ul style="list-style-type: none"> Upgrade East District Hospital (Singtam): +100 beds Upgrade South District Hospital (Namchi): +100 beds Reconstruct North District Hospital (Mangan): 100 beds (replacement) Upgrade CHC at Jorethang to 100 beds: +70 beds Upgrade PHC at Pakyong to 50 beds: +40 beds Upgrade 1 PHC: +20 beds 	531 Cr

2	New PHSCs	<ul style="list-style-type: none"> Construct 3 new PHSCs 	1.44 Cr
3	Upgrade equipment, procure ambulances	<ul style="list-style-type: none"> Replace / procure equipment Procure ambulances 	11 Cr
<i>Tertiary health care</i>			
1	1,000 bedded multi-speciality hospital	<ul style="list-style-type: none"> Phase 1 almost complete; phase 2 to be completed by 2019 	450 Cr
2	300 bedded chest and respiratory hospital	<ul style="list-style-type: none"> Specialized hospital to combat increasing rates of MDR-TB and TB in the state 	350 Cr
	Total		1,343 Cr

8.26 The projected allocation for expenditure under revenue head and do not include the capital expenditure, which, as indicated earlier is separately allocated under each demand for grant. The allocation of revenue expenditure is in keeping with the targets as also the overall resource availability and the priority that could be attached to this SDG. What is important for achieving the targets under health and general well being is further strengthening of the infrastructure and upgradation of the existing facilities and supply to match the demand based on a continuous assessment.

Chapter 9: Goal 4- Inclusive and Equitable Quality Education

Two important components of empowerment are health and education as these are critical for improving capabilities. SDGs have, therefore, attached significant priority to these two parameters. Broad long term vision under this SDG is to ensure that within next 15 years, all boys and girls have access to quality early childhood care and preprimary education, complete primary and secondary education with effective learning outcomes and have access to affordable and quality technical, vocational and tertiary education. In next 15 years, gender disparities across the spectrum of education is completely corrected and all learners acquire the skills, consistent with their preferences, that are needed to promote sustainable development. The instrument for achieving these end targets are the quality of education, quality of teachers and an institutional set up which is able to correct any mis-matches in skill needs and availability through appropriate re-skilling and new training.

9.2 Literacy levels in Sikkim are better than the national average. These have also shown considerable improvement over the years, both for male and female literacy (Table 9.1). But, beyond literacy, education standards and vocational training options are limited.

Table 9.1: Literacy rates (per cent)

	1981			1991			2001			2011		
	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female	Person
Sikkim	53.00	27.38	41.59	65.74	46.69	56.94	76.04	60.40	68.81	87.29	76.43	82.20
All India	56.38	29.76	43.57	64.13	39.29	52.21	75.26	53.67	64.84	82.14	65.46	74.04

Source: Rajeev Malhotra: India Public Policy Report, 2014

9.3 National Sample Survey Organisation in the Ministry of Statistics & Programme Implementation, in their Education related survey of 2014 (Table 9.2) has provided the status of population in terms of their educational attainments. In Sikkim 12.8 per cent of males and 13.6 per cent of females were not literate as against the national average of not literate males and females of 24.3 per cent and 37.9 per cent, respectively. The relative advantage at lower level of educational attainment, however, evaporates at the level of diploma holders and at post graduate level. Further, in Sikkim the ratio of female to male in educational attainment up to diploma level is not adverse.

Table 9.2: Distribution of person (per 1000) in terms of their Education Status

States	Not Literate	Literate & upto Primary	Upto Higher secondary	Diploma	Graduate	Post Graduate
Male						
Bihar	325	360	271	7	33	3
Kerala	106	295	471	50	62	16
Sikkim	128	426	361	7	72	7

Delhi	140	266	370	4	180	40
all-India	243	329	340	15	57	16
Female						
Bihar	484	329	173	2	11	1
Delhi	194	246	345	4	168	42
Kerala	124	310	436	40	70	20
Sikkim	136	460	339	7	50	7
All-India	379	302	262	7	37	12

Source: NSSO Education Survey 2014

9.4 General education has continued to dominate and has remained the most preferred stream. Both in rural and urban areas, preference for general education in Sikkim and other States is visible. The number of students seeking professional qualification (Table 9.3) in Sikkim is relatively less and only 1.2 per cent of students in rural areas and 5.4 per cent of persons in urban areas were in professional as against the national average of 2.4 per cent in rural areas and 8.0 per cent in urban areas, respectively. The preference for general education may partly due to limited availability of seats in these institutions. Distant locations and financial consideration could be other factors for lesser numbers getting into these courses.

Table 9.3: Per 1000 distribution of Students (age 5-29) by qualification

States	General	Profession al	Vocatio nal	Total	Gener al	Profess ional	Vocati onal	Total
	Rural				Urban			
Bihar	988	9	3	1000	954	40	5	1000
Delhi	959	41	0	1000	934	62	4	1000
Kerala	894	91	15	1000	878	103	19	1000
Sikkim	986	12	2	1000	945	54	1	1000
All India	969	24	7	1000	910	80	10	1000

Source: NSSO Education Survey 2014

9.5 NSSO survey also attempted to identify the institutions for professional courses. The government operated and private aided institutions catered to nearly 50 per cent of the aggregate enrollment for professional courses. However, in medical and IT/Computer related courses, private unaided institutions were the major provider of education (Table. This could largely be due to the fact that addition of new institutions in Government and government aided sector may not have been able to keep pace with the increase in enrollments for these courses. In IT/Computers, it may also be as the capital costs of setting up such institutions may not be large. Preference for non-governmental institutions could be because these may be perceived better in terms of quality, medium of instruction and non availability of seats/course¹⁵.

¹⁵NSSO survey indicates that the reasons for preference for private institutions were- better standards (16%), non availability (21%) and failed to secure a seat (53%)

Table 9.4: Per 1000 distribution of students by type of institution for higher studies

Particulars	Medical	Engineering	Law	Management	IT/Computer	IIT	Others	Total
Sikkim								
Government	9	39	44	26	69	39	37	263
Private Aided	20	156	0	18	9	31	0	234
Private Unaided	80	208	9	44	146	8	9	504
All Institutions	109	403	53	88	224	78	46	1000
All India								
Government	15	68	8	14	22	48	84	261
Private Aided	18	105	4	16	33	26	42	245
Private Unaided	40	227	4	42	53	54	71	494
All Institutions	73	400	16	72	108	128	197	1000

Source: NSSO Education Survey 2014

9.6 Sikkim is fairly well resourced in terms of school education. It has amongst the best pupil-teacher ratios and student-classroom ratios in the country. Its Gross Enrollment Ratio (GER) is significantly better than national average and enrollment ratios for girls and disadvantaged communities are very robust. Overall capacity of the State's higher education system is estimated at 33,600 across 30 institutes. These institutes are currently operating at an average capacity utilization of 73%, which implies that 9,100 seats are vacant. However, there are some key gaps in the school system that need to be addressed, namely¹⁶:

Shortage of classrooms and teachers at the primary level: E.g., 22% schools with less than 5 teachers in the primary wing

Some basic infrastructure deficits: E.g., 34% schools without electricity, 64% without boundary wall

Sub-par learning outcomes: E.g., 57% class 5 students cannot read Class II text, pass rate for both Class X and XII boards is lower than national average.

Targets

9.7 Broad SDG targets for education sector are summarised in table 9.5 below:

Table 9.5 : Ensure inclusive, equitable & quality education and promote lifelong learning opportunities for all

3 Years	7 Years	15 Years
<ul style="list-style-type: none"> Facilitate children to use knowledge acquired in normal classroom. Acquaint children with number sequence, addition, subtraction, multiplication. 	<ul style="list-style-type: none"> Reading corner in all schools. Use social media to propagate reading corners. Improve quality of education Calibrate Higher and Technical Education to 	<p>All government schools to be print rich and pedagogically supportive. Children by age 8 years to read with comprehension and solve simple mathematical problems.</p>

¹⁶Report of the Boston Consulting Group

<ul style="list-style-type: none"> • Attain basic proficiency in language for effective communication. • Develop language for knowledge acquisition. • Equip teachers to tap spontaneous learning potential of children in a print rich environment. 	become increasingly job oriented	Children in higher class to become self reliant readers
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Programmes/Schemes

9.8 In order to enhance the effectiveness of education system, the Government on its part has taken up the mission to revamp the system of education to make it equitable, holistic and inclusive. To improve the quality of teaching-learning process, the State intends to undertake a Teacher Training Mission. Extensive training modules are being devised which will incorporate all required components for better quality of classroom instruction and to have a cadre of fully qualified teachers by 2020. Special focus will be on imparting training for the pre-service and the in-service teachers. The teacher training institutes in the State will be upgraded both in terms of faculty as well as infrastructure.

9.9 An extensive programme for evolving a suitable curriculum and training all teachers in computers was taken up during the 12th Five Year Plan and would be continued. Overall development of the infrastructure will be done to provide facilities such as: (a) construction of playground with galleries in all secondary schools and above; (b) construction of multipurpose halls in all schools; (c) construction of separate toilets for girls and boys along with proper drinking water facilities; and (d) construction of child friendly toilets for students with special needs. All new construction of schools will include facilities that would be taking care of the requirements of the differently-abled students.

9.10 To undertake the Quality Mission for School Education, the department will focus on reducing the dropout rates, adopt standards developed for quality school governance and encourage accreditation of schools. Administrative and financial powers are being decentralized to heads of schools. To address the issue of equity in education, the Government is committed to encouraging the students studying in government schools by continuing the Hon'ble Chief Minister's Special Merit Scholarship Scheme, wherein the selected students are sent to the best public schools of the State and country. Clear policy framework will be implemented to increase the number of students availing this facility.

9.11 The Quality Mission for Higher and Technical Education would involve strengthening the already established Sikkim University, opening new polytechnics in remote areas to facilitate the vertical progression of vocational education for students and encouraging the development of skill based learning. In order to implement the Total Literacy Mission, the State is proposing to upgrade all existing government colleges to Institute of Excellence, start B.Sc. Courses in all colleges and

augment the present intake, open model colleges at Ravangla, Soreng, Mangan and Gangtok, and facilitate the functioning of the National Institute of Technology (N.I.T.) at Ravangla. State would consider setting up a high quality University and integration of vocational training in colleges. Through public private partnership, IITs will be opened and set up a institutional system of delivery and placements.

Resources

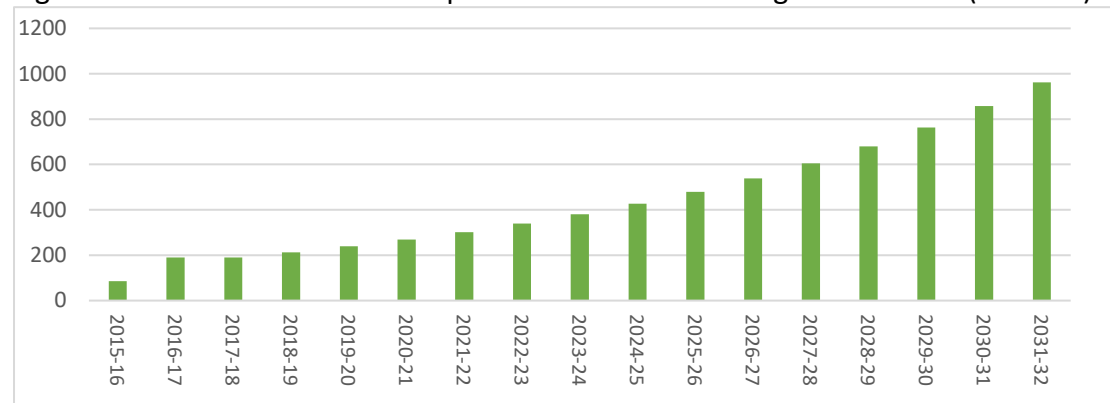
9.12 BCG has identified resource requirements for improving access and quality of education, consisting of both revenue and capital expenditure (Table 9.6). While the capital component has separately been considered under demand for grants at aggregate level, though no specific scheme has been considered, the revenue expenditure needs has been incorporated and is subsumed in overall projected resource allocation.

Table 9.6: Funding Requirements for Education Sector as identified by BCG

Dimension	Concern	Initiatives	Funding required
Access	Shortage of classrooms, teachers	Create additional capacity <ul style="list-style-type: none"> Additional classrooms in ~400 schools Hostel construction in 5 secondary schools 	Rs. 700-720 Cr
	Basic infra deficits in schools	Fill basic infrastructure deficits across schools <ul style="list-style-type: none"> Approach roads for 133 and boundary wall in 558 schools Electricity in 298, drinking water in 26 schools, 125 toilets units Libraries in 32 schools, furniture in 2, and fans in 217 Infrastructure upgrade in 6 senior secondary schools 	
Quality	Sub-par learning outcomes	Teacher training for all ~10,600 teachers	Rs. 80 Cr
		Tech-enablement: Sikkim can be a ground for "piloting" innovations such as personalized, adaptive learning <ul style="list-style-type: none"> ICT labs and equipment to 152 schools Internet, smart board and power backup in 508 schools Tablets to students of Class VI and above 	Rs. 150 Cr
		Learning level outcome assessments	Rs. 5 Cr
		Remedial program	Rs. 5 Cr
	Total		Rs.950 Cr

9.13 Overall allocation of resources (revenue expenditure) for education sector is projected to increase from Rs. 190 crore in 2017-18 (BE) to Rs. 963 crore in 2031-32 (Fig 9.1), showing an impressive growth of 12.3 per cent. Expenditure buoyancy of this sector is 1.06.

Fig 9.1: Allocation for Revenue Expenditure for SDG relating to Education (Rs crore)



9.14 Allocation under some important categories for achieving the SDG targets in this sector are indicated in table 9.7.

Table 9.7: Allocation of Resources (major categories) for Education Sector (Rs crore)

Tear	Education Mission/SSY	Madhyamic Shiksha	Higher Education/Vocational Training	Education Support	Others
2015-16	32.98	8.71	21.46	21.68	1.35
2016-17	67.25	39.78	45.71	35.55	2.28
2017-18	59.31	46.50	47.85	33.86	2.30
2018-19	66.60	52.22	53.74	38.03	2.57
2019-20	74.79	58.64	60.35	42.70	2.88
2020-21	83.99	65.86	67.77	47.96	3.23
2021-22	94.32	73.96	76.10	53.86	3.61
2022-23	105.92	83.05	85.45	60.48	4.05
2023-24	118.95	93.27	95.96	67.92	4.54
2024-25	133.58	104.74	107.76	76.27	5.08
2025-26	150.02	117.62	121.01	85.65	5.69
2026-27	168.47	132.09	135.89	96.19	6.38
2027-28	189.19	148.34	152.60	108.02	7.15
2028-29	212.46	166.58	171.36	121.31	8.01
2029-30	238.59	187.07	192.43	136.23	8.97
2030-31	267.94	210.08	216.10	152.98	10.06
2031-32	300.90	235.92	242.67	171.80	11.27

9.15 Allocation, as indicated earlier, do not take into consideration the capital expenditure needs, which have separately been assessed and allocated consistent with overall resource availability and the priorities attached to the sector.

Chapter 10: Goal 5- Gender Equality

Gender equality has one of the key considerations for the development strategy underlying the sustainable development. While elimination of discrimination and violence against all women and girls has been the key target, the SDG of gender equality envisages their effective empowerment and their active participation at all levels of decision making. The SDG requires each State to undertake reforms, as may be necessary, to provide equal rights to women to economic resources and their access to ownership and control of these resources.

10.2 Sikkim is placed favourably in gender equality parameters. In education field (Table 10.1), the number of girls per 100 boys, except at the pre-primary level exceeds 100 indicating that there is hardly any discrimination. In Secondary and Senior Secondary levels, the ratio of girls for each 100 boys have improved over years and is significantly above 100 currently. Even in vocational courses, though more recent data is not available, the number of females exceeds that of male.

Table 10.1: Gender Parity- Number of Girls per 100 Boys

S No.	Stage	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	Pre Primary	90	90	92	91	92	95	94	92		
2	Primary	100	99	100	101	102	102	102	101	102	100
3	Jr High School	112	115	118	120	121	125	127	128	128	122
4	Secondary	99	102	104	109	111	110	112	120	117	121
5	Sr Secondary	90	96	90	92	94	101	106	104	105	112
6	Total	100	100	101	103	106	106	107	108	110	109

Source: Selected Education Statistics, Ministry of Human Resource Development, Government of India.

10.3 While the current enrollment in educational institutions at higher secondary level and in vocational courses for women may be comparable with their male counterparts, the overall education status of persons indicate the adversity has not yet been corrected. The NSSO survey on educational status indicate that there were only 2.9 per cent female with graduate level and above (including diploma and certificate courses) in Sikkim as against 7.3 per cent males (Table 10.2). The ratio was equally adverse at all India level also.

Table 10.2: Distribution of persons above 15 years (per 000) as per Educational Status

Particulars	Male		Female	
	Sikkim	All India	Sikkim	All India
Not Literate	99	206	205	401
Literate up to Primary	432	221	434	199
Middle	190	188	142	142
Secondary/Higher Secondary	206	267	191	188
Diploma/Certificate	4	18	1	7

Graduate & Above	69	100	28	62
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Source: NSSO Survey of Education, 2014

10.4 Other important parameter of gender equality is the ratio of female in labour force and work force. The NSSO data, based on their employment survey of 2011-12 indicate that for each 100 males in labour force in rural areas, there were 84 females. In urban areas, this ratio is lower at 0.44, but this is significantly better than the national average (Table 10.3). Even in work force participation rate, which indicate actual employment, female in Sikkim fare better compared to their counterpart in rest of India and that position is valid in both the rural and the urban areas.

Table 10.3: Ratio of Female in Labour Force and Worker Participation in 2011-12

States/ All India		Rural	Urban	All Persons
Sikkim	Labour Force Participation of age group 14+	0.85	0.46	0.78
All India		0.45	0.27	0.40
Sikkim	Work Force Participation of age group 14+	0.85	0.47	0.78
All India		0.45	0.27	0.40
Sikkim	Labour Force Participation All	0.84	0.44	0.76
All India		0.46	0.28	0.40
Sikkim	Work Force Participation All	0.84	0.45	0.77
All India		0.46	0.27	0.40

Source: NSSO Survey 68th Round & Key Indicators of Employment, Unemployment, 2014

10.5 More important, however, is that many women currently doing domestic work on usual basis have been willing to work for different activities if such opportunities are available at their premises. In Sikkim 32.6 per cent of women were willing to work for various activities (Table 10.4), including animal husbandry, food processing, weaving and tailoring. The number of such women in other States and as an average for the country were in the same range, though preferences for type of work has differed across the States. Though women have been performing other than domestic duties, but these have not been recognised. The NSSO survey reveals that women were involved in kitchen garden, animal husbandry, collection of firewood, husking/grinding of foodgrains, tutoring their own and other children, tailoring, fetching water, etc. But these were rather honorary. But their actively seeking job is different as they are looking for jobs for a consideration.

Table 10.4: Number of Women15+ (per 000) willing to work on their premises

States / All India	Animal Husbandry	Food Processing	Spinning & Weaving	Tailoring	Others	Total
Assam	134	18	109	80	53	396
Bihar	121	29	32	88	52	323
Kerala	98	16	4	104	57	280
Sikkim	31	11	52	75	156	326
All India	92	23	28	124	51	319

Source: NSSO Survey on Status of Women

10.6 NSSO in their survey had also requested respondents to give answers with regard to the support which the women would need to take up other assignments of work. For seeking answers, NSSO had categorised women workers as those having a subsidiary occupation with domestic work as their principal activity and others who did not have any subsidiary occupation. At aggregate level, covering women with subsidiary status and otherwise, 29 per cent of women in Sikkim were seeking initial finance on easy terms and an equal number the required training. 11 per cent were looking for working capital support and only 9.4 per cent indicated that they did not need any assistance. At the national level also, initial financing, training and working capital loans were the three critical supports that the women were looking for to get gainfully absorbed in occupation for supplementary income (Table 10.5).

Table: 10.5 Distribution of Women age 15+ (out of 000) doing domestic activities seeking support for other work

Particulars	No assistance	Initial Finance on easy terms	Working Finance	Raw Material availability	Assured Market	Training	Need for a Premise	Others
Sikkim								
With subsidiary occupation	0	0	820	0	0	180	0	0
Without Subsidiary occupation	98	301	86	0	69	291	6	148
All	94	292	110	0	67	287	6	143
All India								
With subsidiary occupation	31	466	202	27	59	145	15	50
Without Subsidiary occupation	40	357	183	33	65	245	7	68
All	39	375	186	32	64	228	8	65

10.7 The rate cognizable crime against women in Sikkim shows some diverging trends and in some cases this is higher than the national average (Table 10.6). While Sikkim had very low rates cruelty by relatives and cases of abduction relative to the national averages, but the rate has been accelerating, particularly post 2001. This reversal of trend has indeed been disturbing. Rape cases in Sikkim were not only higher than the national average, these were again on rise.

Table 10.6: Cognizable crime against Women¹⁷ (number per 100,000 population)

Particulars	Sikkim			All India		
	1991	2001	2011	1991	2001	2011
Rape	1.89	1.23	2.85	1.20	1.59	1.87
Molestation	2.05	1.91	2.47	3.24	3.92	3.91
Abduction ¹⁸	0.90	0.31	1.21	1.42	1.43	2.51
Cruelty by relatives ¹⁹	0	0.19	0.60	2.33	4.22	6.17

Source: Rajeev Malhotra- India Public Policy Report, 2014

Target

10.8 The gender equality for Sikkim primarily concerns with the empowerment of females in all respects, social, economical and psychological. It encompasses measures to improve their capabilities through training, making legal system to recognise them as independent in schemes, programmes and at all places where it matters. Cultural norms, rule of society and mechanisms through which final outcomes are determined are the three elements which lead to gender disparities, and these needs to be addressed. Further, in view of a greater incidence of cognizable crime against women, target set also covers that dimension as well. Target set by the State for gender equality is indicated in table 10.7.

Table 10.7: Achieve gender equality and empower all women and girls

3 YEARS	7 YEARS	15 YEARS
1. Mention mother's name in all government transactions including land records. 2. Bring into force the Sikkim Succession Act 2008, that will provide equal succession rights to unmarried daughters at par with sons. 3. State to patronize women members of families in disbursing all government benefits. 4. Provision of mainstreaming of out of school girls into formal education. 5. Vocational training for income generation for school dropout girls above the age of 18 years. 6. Remarriage incentives for remarriage of widows. 7. Prevent trafficking of girls. 8. Rescue and rehabilitation of victims trafficking which includes reintegration and reparation 9. Quick and easy provision for both Civil and Criminal remedies against violence.	1. Strengthen woman's helpline 2. Strengthen system(of protection of women) which includes legal aid, medical and financial assistance. 3. Prevent exploitation of women.	1. Bring women at par in the society.

Resources

¹⁷Data is average of 1990-1992; 2000-2002; and 2009-2011

¹⁸Includes the crime relating to kidnapping

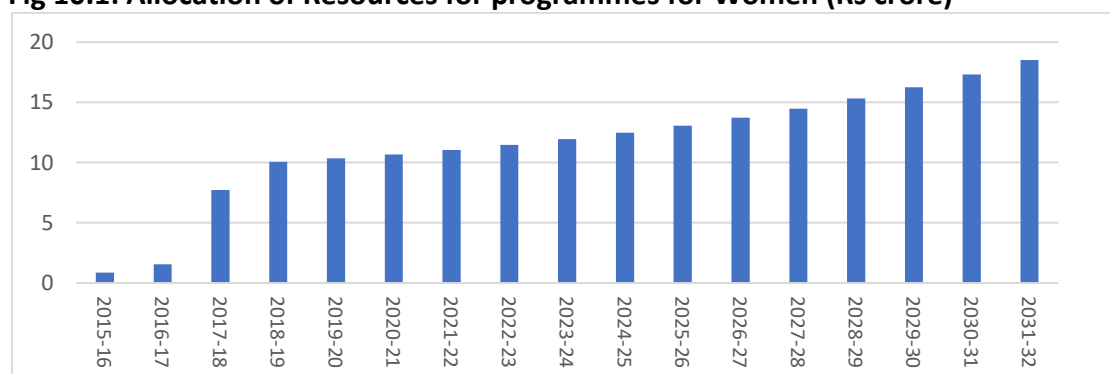
¹⁹Includes crime relating to dowry deaths and cruelty by family

10.9 State feels the need of increasing female participation in labour force in both rural and urban areas. Their participation in urban areas considerably lags behind the participation in rural areas. This is because of the need of different skill sets in urban jobs. Further, job profile and avenues are continuously undergoing changes. State has, therefore, included vocational training and training of drop out as part of the SDG. Over 15 year period, the ratio of female in labour force and work force participation in urban area is targeted to get at a comparable level as in rural areas. Most of these initiatives are administrative and legislative and are being attended.

- Mention mother's name in all government transactions including land records has become mandatory.
- Sikkim Succession Act 2008, that provides for equal succession rights to unmarried daughters at par with sons has also become effective.
- Women members of families are considered in disbursing all government benefits.

10.10 Overall allocation of resources for women as the principal beneficiaries is projected to increase from less than Rs. 2 crore in 2016-17 (RE) to Rs. 18.5 crore in 2031-32 (Fig 10.1).

Fig 10.1: Allocation of Resources for programmes for Women (Rs crore)



10.11 Allocation for the key initiatives are summarised in table 10.7. The lower allocation should not be construed as being given low priority to gender equality as the other programmes, such as rural employment guarantee, skill development, education, health and other specific intervention are also have women as preferred beneficiaries. Since allocation for these are indicated under respective SDGs and demand for grants, these have not been included here.

Table 10.7: Allocation of Resources for Schemes under SDG of Gender Equality (Rs lakhs)

Year	Rajeev Gandhi Schemes for Empowerment of Adolescent Girls	Proud Mother Scheme	Grants in aid to State Women Commission	Financial Support for Economic Activities of Women
2015-16	32.5	0	54.8	
2016-17	100.0	0	54.8	
2017-18	214.1	500	58	

2018-19	240.4	500	65	200
2019-20	270.0	500	65	200
2020-21	303.2	500	65	200
2021-22	340.5	500	65	200
2022-23	382.3	500	65	200
2023-24	429.4	500	65	200
2024-25	482.2	500	65	200
2025-26	541.5	500	65	200
2026-27	608.1	500	65	200
2027-28	682.9	500	65	200
2028-29	766.9	500	65	200
2029-30	861.2	500	65	200
2030-31	967.1	500	65	200
2031-32	1086.1	500	65	200

10.11 In the proposed allocation, Rs 2 crore has been provided to support women willing to work as subsidiary occupation in addition to their domestic duties from their premises as indicated by NSSO survey. Gender equality has to be considered at all levels, education, health, enterprises, skill development as also at the level of decision making and how society perceives their role.

Chapter 11: Goal 6- Clean Water & Sanitation

The sustainable development goal concerning clean water and sanitation envisages to ensure universal and equitable access to safe and affordable drinking water to all. Improving water quality, reducing pollution and reducing the proportion of untreated waste water by 50 per cent are the other targets to be achieved in a period of 15 years. Together with the water supply, SDG also consider providing universal access to equitable sanitation and hygiene. To have adequate water availability, SDG also envisage rejuvenating all water bodies, reduce water wastes and have technology based solutions which reduces water use for household, agriculture and industrial uses. Swachh Bharat Mission is the other component under this goal and together these intend to make living more hygienic, less polluting and healthy.

11.2 Sikkim is the first open defecation free state in India. In terms of the access to electricity, safe drinking water and sanitation, Sikkim has much larger coverage than the national average. But despite this relatively better coverage, over 30 per cent of rural households and 12 per cent of urban households do not have access to the basic civic facilities (Table 11.1)

Table 11.1: Households with Access to Electricity, Safe Drinking Water and Toilet (per cent)

States/ All India	1991			2001			2011		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Sikkim	5.4	16.3	10.8	41.1	89.0	47.0	68.8	88.0	74.2
All India	3.9	50.5	16.1	10.2	63.5	25.1	19.2	72.3	36.2

Source- Rajeev Malhotra, India Public Policy Report, 2014

11.3 NSSO in their survey of water supply and sanitation conditions undertaken in 2012 (July-December) had asked respondents about water supply and sanitation. With regards to their questions relating to distance covered for getting water, it was observed that 78 per cent of rural households and 14 per cent of urban households in Sikkim had access to water with in their own premises. Only 4 per cent of rural households and 0.3 per cent of urban households were required to travel a distance of up to 0.5 Kms (Table 11.2). This position was much better relative to the national average.

Table 11.2: Availability of water- Distance covered (per 000 households)

States/ All India	Rural			Urban		
	With in Premises	Travel up to 0.2 Kms	Travel up to 0.5 Kms	With in Premises	Travel up to 0.2 Kms	Travel up to 0.5 Kms
Manipur	99	616	203	476	456	42
Kerala	735	227	34	819	162	12
Sikkim	781	137	40	949	31	3
Goa	811	140	48	996	0	3
All India	461	409	93	768	182	29

Source- NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India

11.4 Similarly, with regards the responses relating water availability for their exclusive use and sharing, it was observed that dependency of households on community water sources was very limited. Only 2.6 per cent of the urban households and just 0.1 per cent of rural households were using community sources (Table 11.3).

Table 11.3: Availability of water- Water Sources (per 000 households)

States / All India	Exclusive Use		Common Use		Community Use	
	Rural	Urban	Rural	Urban	Rural	Urban
Bihar	451	432	259	433	178	107
Kerala	667	654	40	141	94	112
Sikkim	705	549	95	412	1	26
Tamil	232	274	62	233	641	292
all-India	337	468	106	253	467	192

Source- NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India, 2012

11.5 NSSO survey also revealed the level of satisfaction for water supply arrangements in Sikkim.

- 64.9 per cent of household in rural areas and 94 per cent in urban areas reported adequate water availability.
- 92.6 per cent in rural and 87.8 per cent in urban areas, households reported of using the treated water.
- Average time taken to reach the water source and waiting there was only 21 minutes in rural areas and 15 minutes in urban areas.
- 96 per cent in rural areas and 80 per cent in urban areas mentioned that they are not required to make any payment for water.

11.6 With regard to sanitation facilities, the survey observed that most of the household in Sikkim had toilet facilities for their exclusive use. Only 0.2 per cent of rural households reported of lack of toilet facility as against an all India average of 59.4 per cent (Table 11.4).

Table 11.4: Availability of toilet facility (per 000 households)

States/ All India	No Facility		Exclusive Use		Improved	
	Rural	Urban	Rural	Urban	Rural	Urban
Jharkhand	905	177	75	570	89	801
Odisha	813	182	124	496	173	805
Sikkim	2	0	857	556	991	1000
Nagaland	0	0	972	791	981	994
all-India	594	88	319	639	388	896

Source- NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India, 2012

11.7 Survey also revealed inadequacy of drainage facility in rural and urban areas in Sikkim. 22.4 per cent in rural areas and 3.4 per cent in urban areas in Sikkim reported

of having open/kutchra drainage facility. 40.2 per cent of rural and 3.0 per cent urban household reported complete absence of drainage facility. Similarly, for the arrangement relating to garbage disposal, 88 per cent of rural (68 per cent as the national average) and 14.4 per cent of urban household (24.2 per cent as the national average) reported of there being no arrangements²⁰. On the impact of the availability or lack of sanitation facilities, the survey reported that 66.2 per cent of household (98 per cent as the national average) reported moderate to severe problems of mosquitoes and common household flies. The response of local bodies, however was insufficient to tackle this problem and 61 per cent of households (national average of 78.8 per cent) had to make their own arrangement to overcome this problem.

Target

11.8 The question is not only of the accessibility, but rather adequate availability of a reasonable standard of water and sanitation facilities which gets continuously upgraded with proper collection and disposal arrangements. There is a need to economize on need and find technology based solution for collection and disposal of waste. The targets under SDG has, accordingly been set to ensure the access is compete and covers both the adequate quantity and quality aspect (Table 11.5).

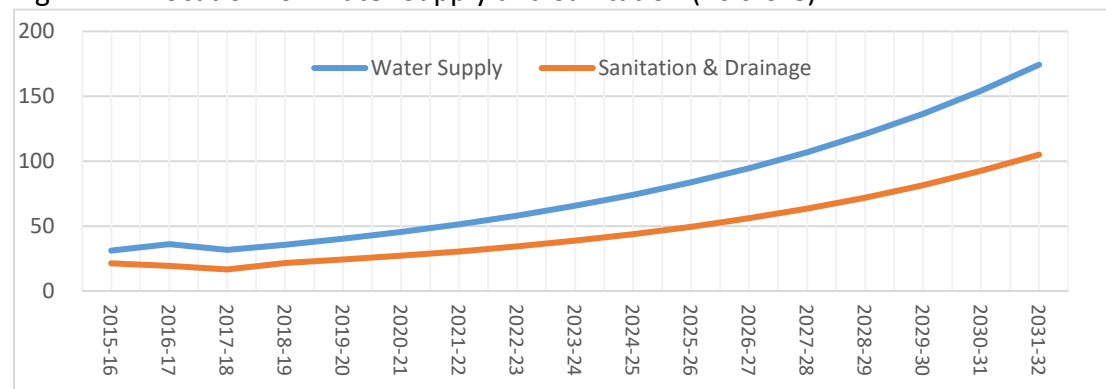
Table 11.5: Ensure availability and sustainable management of water and sanitation for all		
3 YEARS	7 YEARS	15 YEARS
Cover all urban areas (including notified towns, bazars) with adequate and treated water supply arrangements	Efforts are made to achieve total coverage for providing adequate potable drinking water and sewerage facilities in all urban areas of the state	The department also ensures an effective and sustainable delivery system for qualitative and sufficient drinking water in all areas, at the same time ensuring efficient and sustainable sewage disposal systems to check pollution of both land and water bodies within Sikkim.
Cover entire rural areas with adequate and treated water supply arrangements	Obtain supplementary funds from other agencies to scale up the operations	
Cover on a gradual basis urban and rural areas with garbage collection		
Prepare a plan for garbage disposal- follow a top down approach from urban centres to notified areas and rural areas		

Resources

²⁰NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India- July-December 2012

11.9 Schemes for water supply and sanitation are implemented by local bodies, urban and rural development departments and the department of public health engineering. These departments and agencies consider access, availability, quality and delivery issues. Overall allocation of resources for water supply and sanitation, covering these agencies is projected to increase from Rs. 59 crore in 2017-18 (BE) to Rs. 279 crore in 2031-32 as indicated in Fig 11.1.

Fig 11.1: Allocation for Water Supply and Sanitation (Rs crore)



11.10 While Sikkim is the cleanest state in India, the problem of management of 73.5 MT of municipal solid waste generated each day from urban centres remains to be tackled. 50 MT of this waste is generated in Gangtok alone. While banning the styrofoam products and use of plastic bottles in government meeting are steps in right direction and are being taken at generation level, but segregation, reduction, reuse and disposal needs to be addressed. Technology will have a lead role in this direction.

11.11 There is a need to incentivise implementation and rewarding the innovative ideas. It is suggested that a liveability index, which covers availability of civic and other infrastructure facilities (the access), the use of these facilities (the affordability), maintenance and upkeep of these facilities (their operation) and their expansion in terms of future requirements (the perspective) is generated and a separate incentive fund of Rs 50 crore is created.

Chapter 12: Goal 7- Affordable & Clean Energy

The goal of universal access of affordable clean energy has the twin objective of reducing pollution as also to improve the living standards of persons. The target envisages increasing the share of energy from non-exhaustive renewable sources in overall energy mix and doubles the rate of improvement in energy efficiency. Besides encouraging research and development in generation, it also envisage improvement in transmission and distribution of energy and bringing down the post generation losses in getting electricity to the end consumer to its minimum level. The instruments for this goal are improving generation mix of energy, improved transmission and distribution, metered access to incentivise energy use and generating awareness to reduce misuse.

12.2 Sikkim is fortunately placed in terms of power availability (Table 12.1) which matches the demand for power. 100 per cent households in urban areas (as against national average of 97.9 per cent) and 99.1 per cent rural households (as against a national average of 80 per cent) have access to electricity²¹. Of the house that have access to electricity, only 3 per cent of urban and 11.3 per cent of rural household have temporary connections.

Table 12.1: Power Demand and Availability

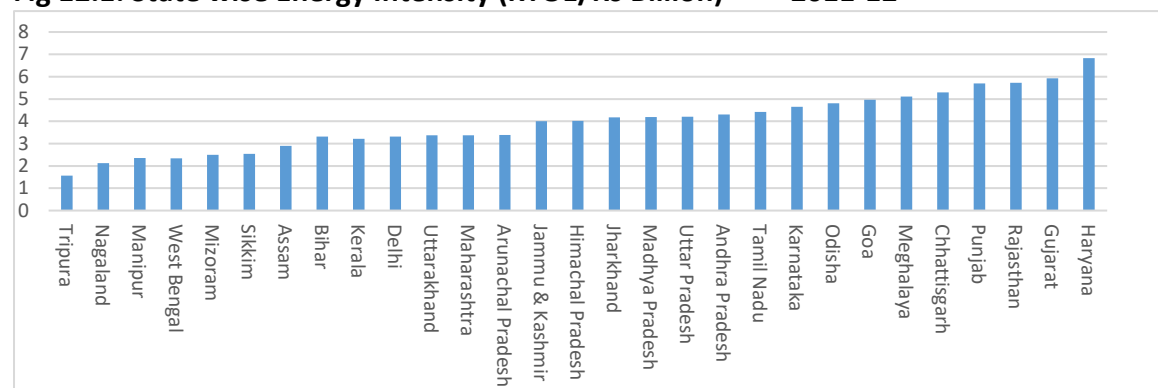
	2005-06	2010-11	2015-16	2005-06	2010-11	2015-16	2005-06	2010-11	2015-16
	Power Demand (MKH)			Power Availability (MKH)			Shortages to Demand (%)		
Assam	4051	5403	8762	3778	5063	8272	6.7	6.3	5.6
Delhi	21602	25625	29626	21281	25559	29583	1.5	0.3	0.1
Goa	2338	3154	5120	2338	3089	5119	0.0	2.1	0.0
Sikkim	212	402	406	210	402	406	0.9	0.0	0.0
Uttar Pradesh	55682	76292	106370	44033	64846	93052	20.9	15.0	12.5
ALL INDIA	631757	861591	1114235	578819	788355	1090713	8.4	8.5	2.1

Source: Central Electricity Authority

12.3 Sikkim also have relatively lower energy intensity measured as energy use for each one billion of GDP generation. As assessed by the Tata Energy Research Institute in 2011-12, Sikkim has energy intensity of 2.54 as against an energy intensity of more than double this number in Haryana, Punjab, Gujarat and Rajasthan (Fig 12.1).

²¹NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India- July-December 2012

Fig 12.1: State wise Energy Intensity (KTOE/Rs Billion)²²- 2011-12



12.4 State has also the advantage of the bulk of energy being from hydro projects which is non polluting. Further, the hydro potential far exceeds the State's requirements and therefore has the possibility of contributing to its resource generation. BCG has identified Hydro Power as one of the three key sectors for revenue augmentation of the State.

²²Tata Energy Research Institute- Energy Intensity

SDG Targets

12.5 The targets set under SDG envisage provide clean energy, reduce the transmission and distribution losses and efficient delivery of power to the end users (Table 12.2).

Table 12.2: Ensure access to affordable, reliable, sustainable and modern energy for all

3 YEARS	7 YEARS	15 YEARS
<p>1. Extend Power Grid for electrification of rural households, strengthen power supply and improve availability and access of electricity in rural areas.</p> <p>2. Provide 24x7 power supply in all rural areas.</p> <p>3. Reducing AT and C losses in notified towns by 10 per cent implementing energy auditing, augmenting and strengthening sub-transmission and distribution systems.</p> <p>4. Prepaid and smart metering of consumers.</p> <p>5. 24 x 7 power supply to all urban areas.</p>	<p>1.Reducing AT and C losses in notified towns and bring them to the levels prevailing in comparable areas , implementing energy auditing, augmenting and strengthening sub-transmission and distribution system.</p> <p>2. Prepaid and smart metering of consumers.</p> <p>3. 24 x 7 power supply to all urban areas.</p> <p>4. Undertake extensive electrification to have universal coverage to cover all unelectrified and partially electrified habitations/ households.</p>	<p>Undertake renovation and refurbishment of existing mini HEP, construction of mini HEPs, maintenance of assets created under APDRP</p>
Initiatives on developing solar power on an extensive scale in both urban and rural areas should start bearing noticeable results.	Increase generation of solar power both off grid and grid connected to meet target of 20 per cent of total generation.	

Power sector constraints

12.6 BCG identified the following constraints in power sector, which had a bearing on resources of the State. These included the following:

- (a) Sikkim has a robust hydro project pipeline of 9 projects with a capacity of 2526 MW.

- (b) However, some key projects are facing significant time and cost over runs. The key projects initiated in mid 2000s with total capacity of 1820 MW developed by Independent Power Producers (IPPs)- Teesta III (1200 MW and cost of Rs. 5700 crore); Rangit IV (120 MW and cost of Rs 726 crore); and Teesta VI (500 MW and cost of Rs. 3000 crore), expected to come on stream in 2012-13 may get commissioned only during 2017-2019 only.
- (c) The cost of these projects is now estimated at Rs. 23,000 crore, as against original budget estimates of Rs. 9400 crore, or more than 140 per cent.
- (d) The cost escalation and time overrun results in a debt overhang, as 80 per cent of project cost is debt financed. Government of Sikkim has proposed to increase its stake in these projects from 26 per cent to 51 per cent and proposing to provide guarantee for additional loan of Rs 2700 crore from Power Finance Corporation (PFC).
- (e) The viability of these projects critically depends on power tariff and only a tariff in excess of Rs. 4 per KWH ensures their viability.
- (f) Another critical factor which could improve viability is interest subsidy or renegotiation of interest rates, but overall impact of interest rate reduction is not significant and power tariff become the critical viability component. At interest rate of 9.75 per cent, required tariff is estimated close to Rs. 6/per KWH.

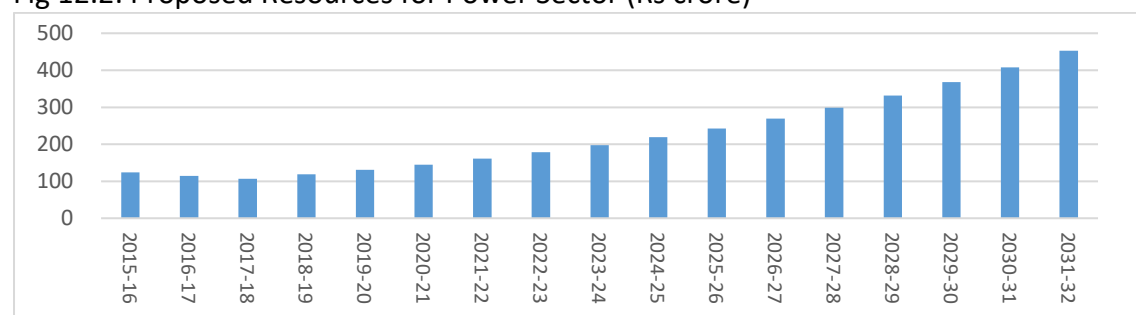
12.7 The current system of distribution of electricity through the Department is sub optimal as it does not provide any incentive for better performance. Inefficiency in this system gets concealed in overall performance of the Department. This system also leads to higher State liabilities. It has, accordingly, been suggested by National Institute of Public Finance & Policy and BCG group that State should consider unbundling of power sector with generation as independent entities and transmission and distribution handled by another entity. Unbundling the sector and handing over generation, transmission, and distribution to separate entities would not only create fiscal space and increase additional borrowing capacity for the government, but also enhance transparency and accountability. State should also monitor power utility performance regularly to ensure containment of AT&C losses in a time-bound manner. This will help drive efficiency and avoid fiscal burden under the Restructured Accelerated Power Development and Reform Programme (R-APDRP).

Box 12.1: Suggested Reforms for the Power Sector in Sikkim

- i. Unbundle the energy management system
- ii. Create a new organisational framework to manage this sector in a professional manner with the required expertise, giving adequate autonomy and full accountability for performance.
- iii. Governmental support to this organisation should be only in terms of equity and if at all in repayable loans with interest and not regular plan allocation. The new organisation should tap bank finance as well as infrastructure funds and multilateral agencies.
- iv. Enable the sector to generate surpluses which can boost the State's revenues and augment investments in essential growth, thus driving projects and programmes.
- v. To facilitate this transition, government may guarantee to provide resources for current expenditure for a minimum period of 7 years.

12.8 The current allocation proposed is independent of the unbundling, which may reduce need for allocation of resources in medium to long run. The unbundling to get implemented would also need to be supported to the extent of current revenue expenditure as it would lead to relocation of staff and not any immediate reduction. Further, this could only be facilitated if it is accompanied by an assurance that the existing man power will not be adversely affected in terms of their pay and perks. Overall allocation, including the allocation for supporting solar power generation is proposed to increase from Rs. 107 crore in 2017-18 to Rs. 453 crore in 2031-32. Bulk of this is for transmission and distribution network (Fig 12.2).

Fig 12.2: Proposed Resources for Power Sector (Rs crore)



12.9 Though current power availability is adequate and it is made affordable by the State which covers the costs for a significant section of consumers, there is need to reduce losses on account of high AT & C losses and losses which could be avoided by ensuring proper metering of consumption because misuse is also a revenue forgone.

Chapter 13: Goal 8- Decent Work & Affordable Economic Growth

The development goal of affordable growth not only envisages higher growth of at least 7 per cent plus, but to decouple it from environmental degradation. Together with such a sustainable growth, it visualises full employment which is gainful, productive and optimal in terms of the capabilities of the person. Increased productivity should come through diversification, technological upgradation and innovation. The policies of the State should facilitate such diversification, innovation and enterprise and at the same be careful that the competitive stimulus do not lead to exploitation of labour and working environment fully protects their rights.

13.2 Sikkim has in the last decade been able to sustain a relatively higher growth in income and government incentives and a right mix of activities have made that possible. The sustained in medium to long run, however, has to consider the strengths, weaknesses of the State and the opportunities and threats that it unfolds (Table 13.1). The State has abundant opportunities in areas of tourism, horticulture & floriculture, organic products, pharmaceuticals and ethnic handlooms/handicrafts. Sikkim is a small market, but has limited connectivity. While this is a weakness, it could turn into an opportunity for consumer products, sourced locally and consumed locally. Further, local resource rich products, produced competitively, could find markets outside the State.

Table 13.1: Strengths, Weaknesses, Opportunities and Threats to Growth in Sikkim

Strengths Peaceful State Conducive Climate & Cultural harmony Demography supportive with dominance of youngsters Abundant Power Supportive Administration	Opportunities Tourism options galore Horticulture & Floriculture Fruit Processing Pharmaceuticals Hydro Power Hand loom & Handicrafts Organic Products, Tea Production & processing
Weaknesses Lack of basic infrastructure Limited Connectivity Sensitive Zone restricting industries Rigid work culture Small Local market and high transaction costs	Threats Competition from other NE States Vulnerability to Natural Calamities Excessive dependency on Central transfers for funds Porous border

13.3 Sikkim has a young population and as the NSSO survey suggests nearly 70 per cent of its population in 2011-12 were in age group of 10-50. These are the people who are either entering the labour market or already a part of it. Further its topography is also not very conducive to agriculture of an extensive nature. Generating employment opportunities outside agriculture is important not only for the income generation but also for sustaining its growth. Sikkim witnessed a sharp growth in secondary sector in

2009-10 and hydro electricity (installation of plants by independent power producers), construction and manufacturing (the pharmaceuticals) played a significant role in this 50 per cent + growth (and that has remained a outlier growth). Growth has since moderated to national average levels. But this increased base, particularly in the secondary sector, creates opportunities of spin offs.

13.4 The areas that would generate larger number of employment opportunities have been identified as tourism, medium and small enterprises, health, education, infrastructure including hydro power and industries which would have a comparative advantage, like pharma, information technology and other non polluting ones. Abundant power availability also opens up avenues for energy intensive industries. But all these are skill intensive, and that is where the weaknesses of the State come to surface.

13.5 The primary focus of the government would, therefore, on providing appropriate skill sets to the people through vocational courses and technical qualification, an institutional mechanism which could intermediate between the employees and employers, an institutional set up which on a continuous basis assesses skill sets that are in demand and that are available with a view to correct this mis-match, and an institutional set up which caters to labour welfare related concerns. It would be endeavor of the government to make the jobs outside the public sector equally rewarding and non discriminatory. The National Skill Development Corporation had identified the potential for trained man power and skill sets required (table 13.2).

Table 13.2: Skill Development Requirements to match the potential demand

Requirements	East	West	North	South	Total
Handlooms	17	4	2	6	29
Handicrafts	2067	535	212	750	3564
Horticulture	23098	19927	5612	25522	74159
Food Processing	51				51
Hospitality	13046	5218	3503	2413	24180
IT/ITES	1635				1635
Health care	76	17	33	55	182
Education	496	322	109	321	1248
Tea				95	95
Construction	8474	1553	1048	2880	13956
Hydro Power		2204	12116		13500
Pharmaceuticals	12548			705	13253
Motor Repair	811	406	232	522	1971
Total	62124	30187	22867	32643	147821

13.6 Based on the strengths and potential the targets under the SDG have been set and are summarised in table 13.3.

Table 13.3: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all		
3 YEARS	7 YEARS	15 YEARS
Have policies that facilitates growth in sectors which have a competitive advantage	Create an Institutional Framework which reviews policies and identifies sectors which needs support	Have an Integrated and Convergent Skill Mission Team to functions at the State level to ensure coordinated approach in partnership with all stakeholders.
Strengthen 3 Sikkim Model Career Counseling Service centre (SMCCSC). Centres to be used for mobilization of unemployed youths for various residential job-linked training.	Mission Focus : Interventions for Skill Training and Capacity Building of the youth, women, differently abled persons, tribals, rural people for non-farm jobs and self employment	
Comprehensive end to end training and Capacity Building for Sustainable livelihood/Self Employment	Ensure cordial relation in between the employers and employees.	
Industrial, Technical and Vocational Training through government owned and managed ITIs and other institutes with an agreed MOU.	A comprehensive data base of all youth with their current skill levels, job profile for a seamless transition to better skills	
Make better provisions for worker safety and security.	To become an established regional resource centre for North East and other Hill areas	
Effective enforcement of Industrial Disputes Act, 1947 and Factories Act, 1948	Have all courses aligned with accepted quality norms	

13.7 Skill Development Department has a target to train 1 per cent of population or 5000 youths in addition to another 3000 persons to be mobilised. Skill needs of all nodal departments will be aligned and included in training schedule. Department would create Centre for Excellence in 12 sectors: Organic Farming; Handicraft; Handloom; Media & Entertainment; Power; Beauty & Wellness; Hospitality; Electrical; Automobile Training; IT/ITES; Facility Management (mechanised cleaning); Machine Shop Training. Over a medium term, the Department aims to become an established resource Centre with formal MOUs with mountain states and NE. Directorate of Craftsmanship Training Scheme will be made fully functional to look after all Government ITIs. ITI at Kewzing will be functional and IIT Namchi to be upgraded as model ITI

13.8 A skill development park is proposed to be created at Sokeythang:

- With training infrastructure focusing on urban planning and infrastructure, sustainable technology for housing and transportation for 12 major towns.

- Design for manufacturing Centre with focus on fashion, garments, footwear design, automobile ancillaries in collaboration with Tata and Maruti Suzuki.
- Pharmacy training centre catering to the needs of 18 pharma companies.
- Agro and food processing technology packing and quality certification institute.
- Civil works, logistics, housekeeping and supply chain to support export promotion of organic products.
- Support to upcoming airport operations, maintenance of highways without disruption of supplies to all industry and service providers.

13.9 The Swiss Challenge approach with Tata Project Group as Consultancy and design partner is to ensure that the interventions of the State improve technical capabilities of work force and support the initiatives of better livelihood and mass production with sufficient volumes adhering to global standards for export and domestic markets. A manufacturing focused technology services portal to engage strategic sectors, academic institutions, R & D institutions engaged in manufacturing industries, aims to disseminate awareness and encourage industries to pursue patent acquisition and develop technologies and explore leveraging of technologies for production, marketing, designs is under consideration.

13.10 Sikkim has also considered creation of a talent pool for solar energy mission in collaboration with Central Electronics Limited (CEL) to cater to the needs of trained manpower for solar energy. The Centre would also serve as the base for production of micro inverters required for captive power to domestic households driven by solar energy.

13.11 Government already implements the Factories Act, 1948 and Industrial Disputes Act, 1947 and safeguards the labour interest, but these would be made more effective so that these can provide comfort to both the employees and the employers. Vocational degree with the trades identified based on the skill requirements would be strengthened. Training at Institutions, facilities and infrastructure set up in collaboration with TATA Motors, Maruti Suzuki, Central Electronics Limited, Saint Gobain, Siemens, Legrand, Karcher cleaning systems, Roots multiclean India, SIS, SRM/Veltech Universities, Hewlett Packard and APC under a frame work of collaboration and MOU would be other focus area. SMCCNS would have the key responsibility of mobilization of unemployed youths for being trained for various residential job-linked courses.

13.12 It has been observed that people in Sikkim are to an extent risk averse and have not taken up to entrepreneurship in any big way. It would be important to see many vocationally trained youths taking to setting up establishments rather than becoming job seekers. The Skill Development Department is considering setting up a E-Hub (Entrepreneurship Hub) at Gangtok.

Resources

13.13 For resources under this SDG, small scale & village industries, horticulture & floriculture and training is only considered as other industries, agriculture, IT/ITES and

tourism are being included in other SDGs. Overall resources is projected to increase from Rs. 150 crore in 2017-18 (BE) to Rs. 727 crore in 2031-32 at annual rate of 12 per cent. Broad category wise details are in Table 13.4.

Table 13.4: allocation proposed under SDG Decent Work & affordable Growth (Rs Crore)

Year	Horticulture & Floriculture	Industries & Handicrafts	Training
2015-16	112.8	6.1	12.9
2016-17	136.0	6.6	39.1
2017-18	94.9	16.2	38.9
2018-19	106.5	18.1	43.3
2019-20	119.6	20.1	48.1
2020-21	134.3	22.4	53.4
2021-22	150.9	25.0	59.4
2022-23	169.4	27.9	66.0
2023-24	190.2	31.1	73.3
2024-25	213.6	34.7	81.5
2025-26	239.9	38.7	90.7
2026-27	269.4	43.2	100.8
2027-28	302.5	48.2	112.1
2028-29	339.7	53.8	124.7
2029-30	381.5	60.0	138.7
2030-31	428.4	67.0	154.2
2031-32	481.0	74.8	171.6

13.14 The horticulture and floriculture has significant potential in the State and the constraint of small market and connectivity bottlenecks may be overcome in these sectors. Similarly, skill development initiatives of the State, if properly harnessed could even cater to North East states and other hill areas.

Chapter 14: Goal 9- Industry, Innovation & Infrastructure

Industry and infrastructure not only reinforces each other but critical for a sustained growth. This SDG envisages to promote inclusive and sustainable industrialization and, in fifteen years significantly raise industry's share of employment and output. This will require not only credit and other financial services but other infrastructure of energy, connectivity, marketing and research and development.

14.2 Manufacturing has been contributing to about a third of GSDP of the State, and a significant part of that comes from organised manufacturing. Since 2009-10, when Sikkim got covered under the Annual Survey of Industries (ASI), organised manufacturing sector has recorded better performance in terms of number of factories, invested capital, persons engaged and gross value added in terms average annual growth compared to all India averages (Table 14.1). However, rate of growth of value added per person engaged has been lower. Average value added per person has moderated considerably since 2010-11.

Table 14.1: Some Characteristics of the Organised Manufacturing Sector

Number of Factories	2009-10	2010-11	2011-12	2012-13	2013-14	Growth per cent
Sikkim (Number)	46	64	61	65	66	9.4
All India (000)	159	212	218	222	225	9.0
Invested Capital (Rs Billion)						
Sikkim	12.9	16.4	17.3	23.4	27.1	20.4
All India	19331	23936	28411	31441	33846	15.0
Persons Engaged (Numbers)						
Sikkim (Number)	6484	6844	8906	10278	12749	18.4
All India (000)	11792	12695	13430	12950	13538	3.5
Gross Value Added (Rs Billion)						
Sikkim	17.6	28.5	34.8	37.5	42.3	24.5
All India	6607	8251	9774	10073	10651	12.7
Value Added per person engaged (Rs Million)						
Sikkim	2.7	4.2	3.9	3.6	3.3	5.1
All India	0.6	0.6	0.7	0.8	0.8	8.9

Source: Annual Survey of Industries, MOSPI, Various Issues

14.3 The performance of small scale industries indicate that investment and employment in this sector in Sikkim increased at a faster pace during 2001-2007. Growth in employment in this sector, though from a low base, was indeed spectacular (Table 14.2).

Table 14.2: Some Broad Characteristics of Small scale Sector

Particulars	Numbers (In Lakh)		Investment (in Million)		Employment (In Lakh)	
	Sikkim	ALL INDIA	Sikkim	ALL INDIA	Sikkim	ALL INDIA
Second Census (1987-88)	Insignificant	5.8	78.4	92960	0.01	36.66
Third Census (2001-02)		105.2	154.3	1543487	0.03	249.33
Fourth Census (2006-07)	0.17	361.8	721.6	6899548	0.79	805.24

Source: MSME: MSME Census Reports and State Tables, 2016 Reserve Bank of India

14. 4 Industrial performance in Sikkim considerably benefited from North East Industrial and Investment Policy (NEIIP), which provided a tax free regime to industries in this area. The benefits were in addition to the transport subsidy which neutralised the disadvantages arising due to remote locations of these areas and the connectivity constraints. Incentives that accrued to industries in Sikkim as a result of the NEIIP are summarised in table 14.3 below.

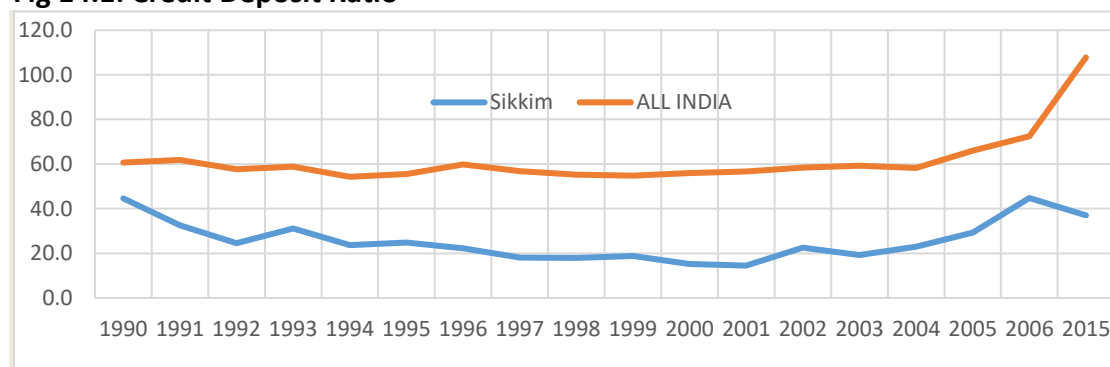
Table 14.3: Subsidies to Industries under NEIIP to Sikkim (Rs crore)

Year	Capital Investment Subsidy		Interest Subsidy		Insurance Premium	
	No	Amount	No	Amount	No	Amount
2007-08			6	0.66	4	0.12
2008-09	35	5.32				
2009-10	111	6.97	3	0.43		
2010-11	1	0.04	5	0.39		
2011-12			1	0.01	4	0.41
2012-13	23	4.55			1	0.17
2013-14			1	0.06	1	0.02
2014-15	9	44.05				
Total	179	60.93	16	1.55	10	0.73

14.5 While the industrial performance during the last 10 years have been impressive, sustaining that growth, particularly without the tax breaks will need to be considered. State has some inherent constraints of small local market, connectivity, transportation costs for both raw materials and finished products; limited credit support and local entrepreneurship would need to be tackled. At the State level, there is need for institutional arrangements which regularly interacts with stakeholders and addresses their concerns. It would be important how the State is able to take advantages of the other schemes of the Government of India, such as Integrated Infrastructure, Industrial Parks, Industry specific schemes for textiles, leather, electronics and pharmaceuticals. This institution could also be the forum for discussions with financial institutions (for improving credit deposit ratio),

infrastructure related Departments (for connectivity issues) and other concerns. The credit deposit ratio of Sikkim is less than half of the all India average (Fig 14.1), which has considerable scope for improvement. It did show an increase during 2000-2006, but moderated again thereafter. Some of the issues concerning industries are highlighted in Box 14.1.

Fig 14.1: Credit Deposit Ratio



Source: Reserve Bank of India: State Tables, 2016

Box 12.1: The Future of Industrialisation for Sikkim

Sikkim has to promote 'clean', low-volume and high-value and knowledge industries given the need to preserve its ecology and overcome its geographical limitations. The process of industrialisation must benefit the state in terms of providing gainful employment and contributing to its revenues.

Role of industry

- Industries that have come into the State should provide training opportunities for local employees, promote ancillary industries and encourage the growth of entrepreneurship.
- Industries that have come into the State have shown very little corporate social responsibility, and appear to be primarily interested in the tax concessions. For this the Government has incorporated a condition "corporate social responsibility" in the MOUs to be signed with the investors that include improving the basic amenities of the surrounding areas, improvement of education, improvement of public health etc.

Role of the Government

- Enable the industrial sector to establish linkages relating to transportation, communication, supply of raw materials, availability of skills and technical manpower, energy, credit, marketing, entrepreneurship and the capacity to constantly upgrade standards, to thrive in a competitive environment.
- Actively promote the expansion of private investment into the state by providing an enabling investor friendly regulatory environment through Single Window clearances, through an interdepartmental Investment Promotion Board, if necessary.

- Build on the thrust given to animal husbandry and agriculture by promoting the processing of these products to produce items for the hospitality industry and sale outside the State.
- Promote an attitudinal change - most local people who have found jobs in the new industries are working in low-end areas. At the same time, engineers graduating from Sikkim's universities hanker for government jobs, rather than look for work in the new industries/power projects. For this attractive incentives are needed for self employment ventures.
- Identify through a commissioned study comparative advantage in the manufacture of products based on locally available resources, with market demand outside the State.

Product/subsectors

- Build on tourism's ability to generate demand for several products, such as beverages including bottled water
- Build on the demand for a variety of goods generated by the expansion in education and health care, such as hospital supplies, stationary items, detergents and household products, which can be produced in the small-scale sector, by encouraging entrepreneurs in these areas
- Given the several higher education institutes in the state, an important thrust area could be the creation of knowledge industries, which are eco-friendly and unaffected by factors such as geographical isolation and lack of transportation.
- Technological application to traditional handicrafts to improve productivity standards, reduce time and costs, help in skill improvement and increase in wages.
- Exploit the state's high-quality bamboo reserves, like other States in the region and processing of bamboo and training artisans in bamboo products.

Targets

14.6 Targets under this SDG have accordingly been set and are summarised in table below:

Table 14.4: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

3 YEARS	7 YEARS	15 YEARS
State to work towards establishing reliable telecommunication connectivity through private service providers	Focus on Small and Traditional Industry	Development of Road infrastructure through ADB and BRICS funding

Review Industrial investment and location options and the need for incentives	Make the Airport optimally operational by 2021	Implementation of Smart Cities Mission and implementation of AMRUT
Create an Innovation Fund and Starts Up Fund to encourage and support young professionals		
Credit availability in grassroots level for industry, infrastructure		
Road connectivity to improve considerably across the entire State including NH 10		

Telecommunication connectivity

14.7 Natural topography and small scale of operation poses formidable hurdles in providing telecommunication coverage. The mountains obstruct radio signals if wireless communication connectivity is planned. BSNL, the lone telecommunication service provider also has its problems like shortage of technical man power at the field level, non-availability of spare parts to maintain equipment etc. and this has affected in providing reliable telecommunication connectivity especially in the remote areas of the State.

14.8 With the Power Grid Corporation of India Limited (PGCIL) laying the Optical Ground Wire (OPGW) between the State Capital and Siliguri, the situation has improved considerably. The National Knowledge Network (NKN) now piggy backs on this. The NIC is also using the OPGW to provide connectivity to State Government. The connectivity at the District Head Quarters in all the four districts in Sikkim is through the National Informatics Centre (NIC) with a bandwidth of 34Mbps from BSNL and 1 Gbps from PGCIL. With the roll out of the scheme for creation of National Optical Fiber Network (NOFN), now rechristened as Bharat Net, high speed broad band connectivity will be established from the Blocks to the GPUs. However, the telecommunication connectivity gap between the Districts to the Blocks still needs to be addressed.

14.9 The State Government has implemented various Mission Mode Projects (MMP), under the National e-Governance Plan (NeGP), but the Government has not been able to roll out these e-governance applications in a meaningful manner because of poor connectivity. Mobile services in remote areas are also bad as a result of which both the administration and public are inconvenienced. Due to problems of telecommunication connectivity in the rural areas the State government has not been able to incentivise the digital payments in a pervasive manner. During natural calamities telecommunications links fail when it is required the most. This hampers relief and rescue operations.

14.10 Many Call Centre and BPO companies have evinced interest in setting up their operations in Sikkim because of the salubrious climate, a population that speaks neutral English, no labour problems – all right ingredients for a IT Enabled Service industry. High operating costs on account of attrition, salaries, air-conditioning has prompted these companies to look at regions like Sikkim to shift their operations. However, bad connectivity has prevented these companies from coming to Sikkim.

14.11 The Department of Information Technology has been raising the issues of bad telecommunication connectivity at various forums and high level meetings requesting for setting up a separate telecom circle and alternate OFC for Sikkim. Sikkim being a sensitive State and strategically located the telecom issues has been raised by the Army (Defence) from time to time at various high level meetings. However, BSNL, it has not been able to provide the required adequate telecommunication services in the State of Sikkim till date. The problems of mobile and 3G communications have also been discussed with private service providers operating in Sikkim like Vodafone, Airtel etc.

14.12 Measures to be taken to improve connectivity in the State could briefly be the following:

- Speedy implementation of BharatNet Project that provides stable Internet Connectivity from Block to the GPUs. The BharatNet Project covers all the 31 Blocks and 176 GPUs in Phase I & II.
- STM on Microwave could be provided to all the Subdivisions. Wimax towers may be set up at vantage points all across the state.
- Where neither BharatNet nor Microwave is possible because of terrestrial or Line of Sight issues, high capacity 32 mbps VSATs (IDDR) may be installed.
- More BTSs need to be installed in the state to make connectivity and internet ubiquitous.
- Power Grid Corporation of India Limited (PGCIL) has been entrusted with evacuating power from the upcoming hydroelectric power projects in Sikkim. PGCIL may be advised to use Optical Ground Wire (OPGW) at the time of installation of the power pylons.
- BSNL which is the main service provider covers remote sparsely populated areas which are economically nonviable to operate in. BSNL may be sufficiently compensated in terms of giving them dark optical fibre by PGCIL. Where BSNL is providing connectivity through VSATs, subsidized bandwidth charges may be considered. For this funding from Universal Service Obligation Fund (USOF) may be considered.
- Alternatively, private players like Vodafone, Airtel, Reliance, Reliance Jio etc., should be encouraged to provide Internet and GSM mobile service across the state through industrial subsidies and incentives.
- Further all the major telecom companies may be requested to provide Telecom infrastructure such as Broadband and mobile connectivity to remote locations of Sikkim by invoking corporate social responsibilities.

14.13 Besides telecommunication, road connectivity is an important issue. NH 10 is the lifeline of Sikkim as it links the State to the main land. While new initiatives of improving the road connectivity have already been announced, it would be important that these are implemented expeditiously. Sikkim is shortly getting an airport, but that should get optimally operational in next 1-2 years. These investments would also be critical for development of tourism, which is one of thrust sectors for the State. Re carpeting of district roads including their upgradation, proper maintenance of district roads, reparation of steel bridges, proper upkeep and construction of new rural roads are also important. The State can take advantage of new regional connecting policy of the Union and improve viability of its air connectivity . Though irrigation as an infrastructure is not much connected to industries, it becomes important from only raising the productivity at the farm level, but for improving the raw material base for agro based industries and to increase the market for industrial products as a spinoff of income increase.

14.14 IT/ITES could play an important role in providing employment in Sikkim. BCG has identified IT/ITES as an important non-polluting non-farm activity for income and employment generation. It has suggested that the Sikkim Government could consider two broad opportunities in the BPO sector:

1. Captive BPO for Govt. services

- Voice services such as travel and tourism advisory, and information on agriculture such as weather and prices
- Low end non-voice services, such as basic digitization services, data mining, and proof reading
- **Skill based "centre of excellence"**. The salient features of the model are as follows:
 - centres specialized in one process/ skill
 - Several small, distributed centres (50-100 seats each)
 - Become back-office for large Indian IT/ ITeS companies
 - Leverage local talent; get locals to move back from big cities

14.15 Sikkim is suitably placed to leverage its educated workforce, availability of land and reliable power and telecom, to develop these models. Its skill initiative can increase the talent pool and some guaranteed business from Government could partially be helpful in viability and the initial assessment of location for these services by the entrepreneurs.

Resources

14.16 Overall resources for these initiatives that could be allocated is assessed at Rs. 1121 crore by 2031-32, increasing at an annual rate of 11 per cent from their current level of Rs. 278 crore (Table. 14.5).

Table 14.5: Resources Proposed for Industry & infrastructure

Year	Irrigation	Road & Transport	Industries	Border Areas/State Support to CSS
2015-16	13.3	73.5	3.7	0.4
2016-17	149.7	113.5	4.8	2.7
2017-18	157.8	96.1	5.1	20.0
2018-19	173.7	135.7	5.6	22.5
2019-20	191.3	146.3	6.1	25.2
2020-21	210.6	157.9	6.7	28.3
2021-22	231.9	170.7	7.4	31.7
2022-23	255.3	184.8	8.1	35.5
2023-24	281.1	200.2	8.9	39.9
2024-25	309.5	217.3	9.8	44.7
2025-26	340.8	236.0	10.8	50.1
2026-27	375.2	256.6	11.9	56.2
2027-28	413.2	279.2	13.1	63.1
2028-29	455.0	304.2	14.4	70.7
2029-30	501.0	331.6	15.9	79.3
2030-31	551.7	361.7	17.4	89.0
2031-32	607.5	394.9	19.2	99.8

14.17Resources proposed do not include the allocation that may be needed for setting up an Innovation and Starts Up Support Fund. A separate allocation of Rs 50 crore annually could be considered for this purpose. The allocation also do not provide for the capital expenditure which has separately been assessed for each Demand for Grant.

Chapter 15: Goal 10- Reduced Inequality

Accelerated economic growth to be sustainable needs to percolate down and its benefits should get progressively reach the bottom 40 per cent of population. The SDGs, therefore, envisage a preferential access to such population together with disadvantaged groups. Equal opportunity needs to be ensured to every one without any exclusion. Outcome of growth must be measured in terms of the convergence or 'catching up' of the people who usually get left out in this process. The goal requires every Government to adopt policies, fiscal, wages and social protection, and access to civic facilities in a manner that progressively lead to better equality.

15.2 Reduction of inequality could be considered from two points. First, is from the point of accessibility of social and economic services to all. Second is from the point of view of improving the overall level of consumption of bottom 40 per cent of population, or the population which currently lives below the State's average level of income. Gini coefficient of Sikkim computed from NSSO consumption data is relatively low (table 15.1) suggesting a relatively more equitable distribution of consumption.

Table 13.1: Gini Co-efficient of NSS Consumption Distribution								
State / All India	1983		1993-94		2004-05		2009-10	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Sikkim	-	-	-	-	0.266	0.254	0.275	0.194
All India	0.297	0.325	0.282	0.340	0.300	0.371	0.291	0.382
Inequality adjusted average real per capita monthly consumption expenditure²³ (Rupees)								
Sikkim	113.9	148.9	100.3	178.7	128.2	212.5	139.1	271.9
All India	78.9	111.9	87.8	124.3	98.2	142.1	104.7	155.8

Source: Rajeev Malhotra: India Public Policy Report, 2014

15.3 Overall per capita consumption of a person in Sikkim has been higher than the national average, but the gap has been narrowing and in 2011-12 it was almost at the national average levels (Table 15.2). The rural-urban gap in per capita expenditure in Sikkim has generally been lower than the national level, but while at the national these seems to have stabilised in last decade, these have shown an increase in Sikkim, indicating some widening of rural-urban disparity.

Table 13.2: NSSO Consumption per capita per month(Rupees)										
State / All India	1983		1993-94		2004-05		2009-10		2011-12	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Sikkim	141	223.3	298.7	518.4	688.5	1106.8	1148.4	1876.5	1388.2	2429.3

²³The inequality adjusted average per capita monthly expenditure has been derived using price deflators from State specific poverty lines and Gini on average NSS monthly expenditure

All India	112.5	164	281.4	458	558.8	1052.4	927.7	1785.8	1278.9	2399.2
Ratio of Urban Consumption Expenditure to Rural Consumption Expenditure										
Sikkim	1.0	1.58	1.0	1.74	1.0	1.61	1.0	1.63	1.0	1.75
All India	1.0	1.46	1.0	1.63	1.0	1.88	1.0	1.92	1.0	1.88

Source: NSSO: Consumption Surveys, Various Rounds

15.4 Consumption expenditure in Sikkim were highly skewed in rural and urban areas (Fig 15.1 and 15.2). While there were lesser number of people in consumption expenditure at lower level and the number of persons below the average level of consumption at 61-63 per cent in rural and urban areas was lower than the national average of 70 per cent, it was nonetheless more skewed.

Fig 15.1: Distribution of persons (Rural) as per consumption expenditure (Per cent)

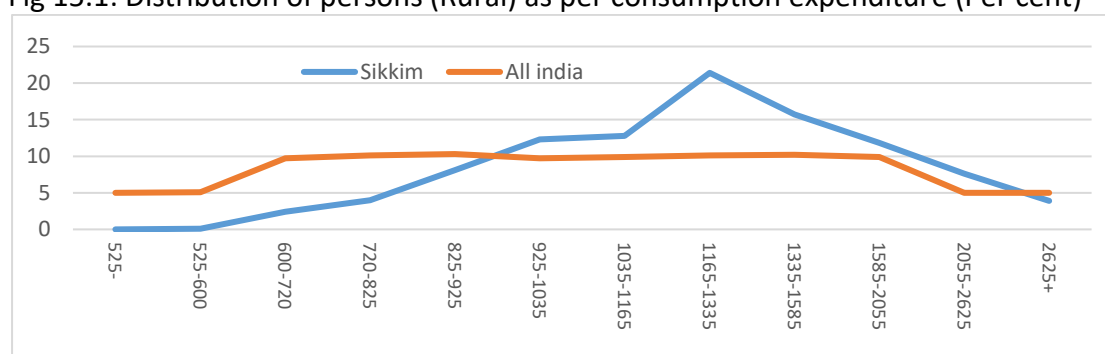
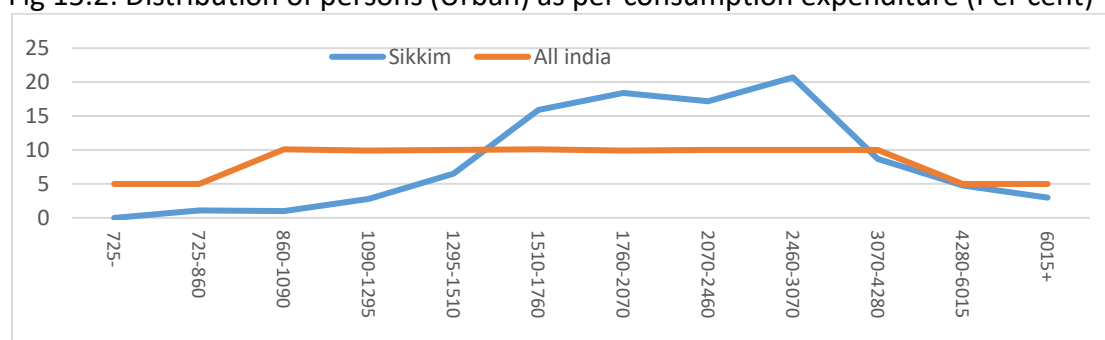


Fig 15.2: Distribution of persons (Urban) as per consumption expenditure (Per cent)



Source- NSSO Consumer Expenditure Survey 2011-12

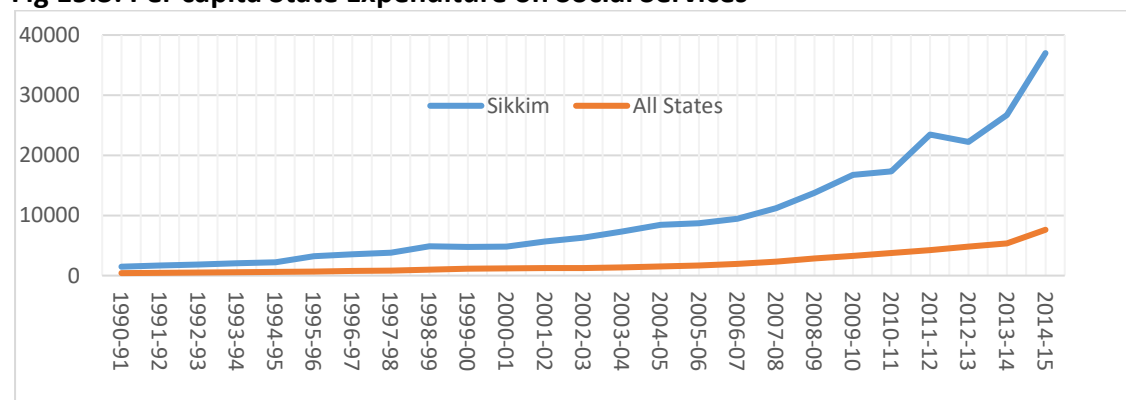
Targets

15.5 The targets for equality has been set in a way that it results better living standards and an empowerment for population which is at vulnerable levels of income or resource endowments. It, therefore, considers identification of persons through periodic verification who are considered vulnerable and have targeted programmes keeping their priorities in consideration (Table 15.3)

Table 15.3: Reduce inequality within and among countries

3 YEARS	7 YEARS	15 YEARS
Identify left out BPL persons through Annual Verification, Social Audit and Door to Door Survey for social security schemes	Have specially designed Skill Development and Entrepreneurship development programmes	Formulate social welfare schemes to uplift weaker sections of the society such that they are able to create their own livelihood
Improve health and nutrition status of children under six years and pregnant and lactating mothers	The Social Help Groups network to be extended to cover all BPL families (identified on a dynamic process) and provide assistance required	
increase the number of children attending AWC		
Universal access to BPL families in education, health, civic amenities at affordable rates		
Implement programs covering marginalized sections of the society		
Mobilise and form 200 SHG under BPL/EWS/LIG and link them with financial institutions/marketing		

15.6 Sikkim already spends significantly higher amount per capita from out of its budgetary sources on social services, comprising health and education (Fig 15.3). A significant proportion of such expenditure is for providing access and improving the affordability of these services to marginalised groups.

Fig 15.3: Per capita State Expenditure on Social Services

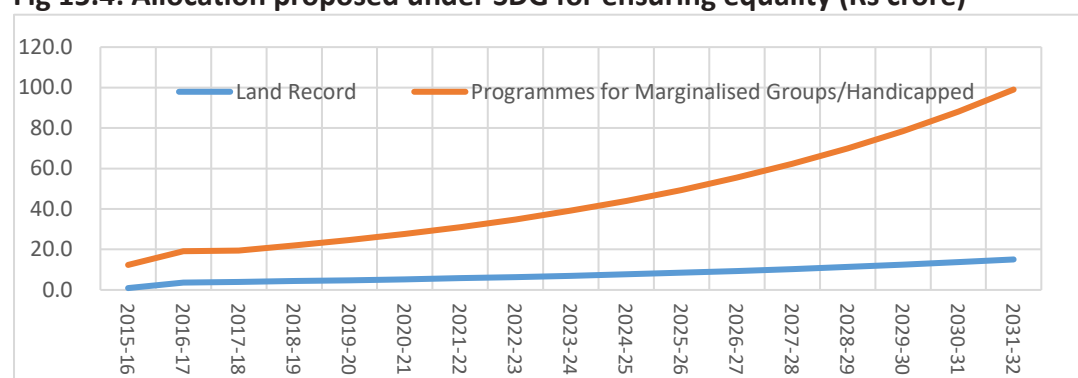
Source: State Tables, 2016, Reserve Bank of India and our calculations

15.7 One of the reasons for relapse to poverty in rural areas is insecure land tenures and deprivation of BPL families of their rights. Sikkim has already provided secured tenures. Proper land records and ensuring that they are not deprived of such rights is one of the essential requirements for improving equality.

Resources

15.8 While resources for ensuring equality and improving the economic status of bottom 40 per cent of population would flow under different demands for grants, such as education, health, poverty alleviation programmes, industry and programmes for development of agriculture and allied activities, under this SDG, two interventions are specifically being proposed. These cover land records and special interventions for marginalised sections as indicated in Fig 15.4.

Fig 15.4: Allocation proposed under SDG for ensuring equality (Rs crore)



15.9 Ensuring that the benefits of accelerated economic growth percolates down to the bottom 40 per cent of population, it is necessary that policies have a focused attention to that section. The interventions across all sectors, including sector specific schemes and skill development provide a preferential access to these groups.

Chapter 16: Goal 11- Sustainable Cities & Communities

Sustainability of cities and communities needs to be measured on broadly four parameters- housing, civic amenities (including the education and health infrastructure), transportation and the facilities for income generation. The SDG for sustainable cities and communities accordingly envisage to ensure access for all to adequate, safe and affordable housing and basic services; access to safe, affordable and sustainable transport systems for all; and adequacy of opportunities for employment and entrepreneurship. Besides these key concerns, the sub goals relate to reducing adverse environmental impact due to air, water and land pollution and improving efficiency in resource use including building resilience for disaster management.

16.2 Since its merger with India, the State has seen rapid urbanisation and towns areas have expanded beyond their notified limits. The projected urban population for 2050 in the state is 50 per cent as against around 11 per cent in 1991. With this kind of growth, it is important to identify management strategies in terms of land requirements and supporting infrastructure in urban areas. The State has nine urban centres and 53 rural marketing centres, which have the potential to become full-fledged urban centres with their attendant urban problems. With limited land for development and expansion, urbanisation has been accompanied by mixed land use, overcrowding and a linear growth pattern. Sikkim is relatively better placed in terms of housing related parameters. Nearly 60 per cent rural and 98 per cent of urban household have pucca houses (table 16.1). Further 81.5 per cent in rural and 94.2 per cent in urban areas reported to have secured tenure for their accommodation²⁴.

Table 16.1: Quality of House (per 000) of households

States/ All India	Pucca		Semi Pucca		Kaccha	
	Rural	Urban	Rural	Urban	Rural	Urban
Manipur	121	338	618	640	262	21
West Bengal	476	895	400	95	124	10
Sikkim	606	969	340	31	54	1
Gujarat	801	979	182	17	18	4
Uttarakhand	970	991	14	4	16	6
all-India	658	936	246	50	96	14

Source- NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India, 2011-12

16.3 Similarly, in terms of availability of transportation facilities to reach to the place of work, while 41.3 per cent rural and 31 per cent of urban households were not required to travel. The satisfaction ratio of having to travel not more than 5 kms was close to 90 per cent (Table 16.2).

Table 16.2: Travel needs (per 000 households) to work places

²⁴NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India, 2011-12

States/ UTs / All India	Not Required to Travel		Travel for less than 5 Kms	
	Rural	Urban	Rural	Urban
Delhi	66	124	602	434
Kerala	219	238	426	325
Goa	279	144	267	277
Sikkim	413	306	467	575
all-India	117	186	653	449

Source- NSSO Survey on Drinking Water, Sanitation, Hygiene & Housing Conditions in India, 2011-12

16.4 In water supply and sanitation (particularly the availability of toilet facilities), Sikkim has also been favourably placed²⁵. The government has thus targeted two focus areas: urban governance and capacity building; and spatial and economic planning. The rural habitations now desire the urban facilities of water supply, health and education infrastructure and civic facilities which were hitherto largely urban concerns.

16.5 The target under this SDG, therefore, envisages improving all habitations, including the non-urban habitation as indicated in table 16.3.

Table 16.3: Make cities and human settlements inclusive, safe, resilient and sustainable

3 YEARS	7 YEARS	15 YEARS
Introduce system of collection of waste from houses and its segregation appropriately	Implementation of Smart Cities - Namchi	Ensure that all habitation are fully supportive for better living conditions with proper water supply, sanitation, transportation and income generation for their inhabitants.
construction of individual household toilets in all households where such facility does not exist	AMRUT implemented in Gangtok	
Maintain data of all beneficiaries under Skill Development initiatives for their gainful employments	Ensure 100 per cent of habitations have access to safe drinking water	
Undertake Skill Development programmes with preferential access to BPL families and ensure that 80 per cent of eligible persons are covered	Ensure 100 per cent of urban households are covered by waste collection system	
Facilitate bank linkages to SHG beneficiaries and persons seeking self employment	Improve public transport and improve its access to all households	

²⁵Chapter 11 of the Report

Fully implement Swachha Bharat Mission and construct insanitary toilets in Urban Local Bodies	Increase coverage of green spaces by a minimum of 20 per cent	
constructions of community and public toilets	Attain kutcha house free status by 2022	
Have a proper policy of solid waste management and encourage households for composting of waste	Housing for EWS/LIG (new individual houses) and provide housing finance	
Segregation of waste, send only inert waste to landfills	Construction of toilets be based on surveys, growth and change in tourism trends	
Consider to reduce, recycle, reuse and resource recovery options due to deficiency of flat land in the State for landfills.	Make waste management sustainable and ensure recycling of inorganic waste, installation of biogas/bio-methanation in hotels, hospitals and other public places	
	Create meli u for private sector participation for SWM	

16.5 BCG consultants, while suggesting a road map for economic self sufficiency and social sector excellence, have proposed among others, construction of houses in urban and rural habitations for poor under Pradhan Mantri Awas Yojana (PMAY). It also proposes complete coverage of habitations for water supply. State is also fully committed to Swachha Bharat Mission and take necessary steps for sewerage, sanitation, water supply, transportation, civic amenities and solid waste management. It has a comprehensive private sector participation plan under the corporate social responsibility. It has engaged Tata Projects and Budapest Waterways Authority as lead partners in the community based water supply, waste management projects and sanitation. Under this initiative 30,000 young persons from rural areas are being trained and skilled, using modern technology and grass root involvement.

16.6 The Government realises that any initiative for sustainable cities and habitations will not be complete until it incorporates the economic generating activities as part of this package. State, therefore, has envisaged creating self help groups and supporting them by way of institutional finance, training, market support and an enabling environment.

Resources

16.7 As indicated, primary consideration for sustainable cities and communities are housing, civic amenities, transportation and opportunities for livelihood. Resources have accordingly been considered under these broad categories. Overall allocation is proposed to increase from a little over Rs. 100 crore in 2017-18 to Rs. 538 crore in

2031-32, with an average annual increase of over 12 per cent. Broad category wise tentative earmarking of resources is indicated in table 16.4.

Table 16.4: Allocation of Resources (broad categories) under Sustainable habitations

Year	Housing	Water Supply	Sanitation & Drainage	RUrban Mission	Infrastructure support
2015-16	7.88	31.14	21.19	5.48	13.03
2016-17	84.98	36.18	19.36	8.16	107.79
2017-18	12.94	31.61	16.60	10.75	29.47
2018-19	14.45	35.70	21.58	12.57	32.94
2019-20	16.14	40.32	24.18	14.06	36.82
2020-21	18.03	45.53	27.14	15.72	41.16
2021-22	20.14	51.43	30.52	17.60	46.01
2022-23	22.51	58.10	34.37	19.70	51.45
2023-24	25.15	65.63	38.77	22.06	57.52
2024-25	28.11	74.14	43.77	24.71	64.33
2025-26	31.42	83.76	49.48	27.69	71.93
2026-27	35.12	94.63	55.99	31.04	80.45
2027-28	39.25	106.92	63.41	34.79	89.98
2028-29	43.89	120.82	71.87	39.01	100.65
2029-30	49.07	136.52	81.51	43.75	112.58
2030-31	54.87	154.28	92.50	49.07	125.94
2031-32	61.36	174.36	105.03	55.04	140.90

16.8 The resource allocation is always a dynamic process and has necessarily to be reviewed in line with the expectations and implementation progress, or the absorbing capacity. However, the resources should be used effectively and efficiently and since there are multiple users, each one with a different implementation strategy, there is need to have an institutional system of incentivising, which is separately being considered in the Chapter on institutional arrangements for monitoring.

Chapter 17: Goal 12- Responsible Consumption & Production

Responsible production and consumption have an inter temporal consideration and the concern for our future generations. The SDG, therefore, envisages to reduce food waste along the entire supply chain and reduce the input in its production. It also suggests to implement policies and programmes that discourages wasteful or avoidable consumption of non renewable resources, fossil fuels and encourages prevention, reduction, reuse and recycling of waste of all kinds. It encourages technology based solution for management of chemicals and others in production process and create awareness about waste generation, its harmful effects on current generation and its constraining sustainability of future generations.

17.2 Sikkim considers sustainable consumption and production pattern as prerequisite for sustained growth in the long run. For sustainable consumption it consider elimination of waste as one of the major goals for being achieved in a defined time frame. Further, every food should be of better quality and more nutritious. In so far as production is concerned, the major emphasis is on ecologically friendly industrial products and organic food products. Sikkim is a pioneering State in organic farming. The SDG for sustainable consumption and production, therefore, concentrate on these two objectives (Table 17.1).

Table 17.1: Ensure sustainable consumption and production patterns

3 YEARS	7 YEARS	15 YEARS
Efforts are to be directed for fortification of food items and providing nutritious food to all, particularly the identified target beneficiaries.	Avoidable food losses to be reduced by 50 per cent.	Food waste and losses is estimated at only 5%. The effort is to bring this loss to nil.
State to encourage Eco-friendly production	Generate public awareness about food waste and have inspection system which reduces losses at different stages from producers to the consumers	Have scientifically constructed godowns programme
Encourage organic farming	Extend area under organic farming and ensure it reaches the critical threshold level for viable processing/marketing	Create Brand Image for organic food
Have new technology which reduces input use in agriculture and animal husbandry products. Agriculture and allied sectors to become economically viable	Ensure adequate essential food and animal products are produced, procured and delivered to consumers	

17.3 BCG in its report has provided a road map for organic farming. State has proposed to focus on 4 crops of ginger, turmeric, large cardamom and buckwheat. It is proposed to cover about 14,000 hectares under these crops out of a total area of 74,000 hectares. Government of Sikkim has put in place a plan across the entire value chain covering production, processing and marketing. Production cluster have been identifies where Farmers Producing Companies could be formed. Input subsidies and training is provided so that this plan catches on. The total production of these four crops may reach around 32,000 tonnes and provide enough economies for processing.

Box 17.1: The Sikkim Organic Mission 2015

The Objectives of the Mission are:

- To frame a policy of organic farming
- To prepare a clear-cut road map for organic farming in the state
- To implement organic farming programmes systematically, to achieve the target of making the entire state organic by 2015
- To develop and explore markets for organic commodities
- To develop linkages between organic farmers and the market with interventions of certification agencies so as to continue the policy permanently
- To develop an accredited Sikkim Organic Brand with a logo
- To make organic farming profitable, sustainable and environmentally acceptable

The Terms of Reference for the Mission are to:

1. Be the overall nodal agency for implementation of organic programmes including promotion, introduction and adoption of appropriate technology for improving production and productivity of /various commodities, improving soil health condition and development of local manorial resources and development of market linkages.
2. Endeavor to promote organic farming in all fields of land under agriculture and allied fields for promotion of organic farming in the state and network and liaison with various departments of the state.
3. Promote, organise and nurture institutions outside the governments, such as cooperatives, NGOs, voluntary organisations, processing units, and boards, for the facilitation of all inputs required for backward and forward linkages related to organic products, so as to provide services within easy reach of farmers on a progressively, economically viable basis.
4. Establish the Sikkim Organic brand in the market and secure the interest and identity of Sikkim organic farmers, collaborate and network with organizations of repute within the country and overseas to obtain new technologies and upgrade skills on organic farming and related activities.
5. Establish linkages with national and international research and development organizations and orchestrate a research support programme to ensure improved efficiency and cost reduction.
6. Receive funds from national and state-funding agencies and other sources for carrying out organic farming activities, maintain records and accounts and submit utilisation certificates to the concerned agency.

17.4 The organic food market in India is nascent but growing fast – it is expected to be a Rs. 22,545 Crore market by 2025, up from Rs. 3,500 Crore in 2015-16.²⁶ Sikkim has a clear head-start in this market as it was declared the first "fully organic" state in India in January 2016. Outside State sales under the central scheme of Mission for Organic Value Chain Development (MOVCD) could also be considered. Private players could also be interested in processing of ginger and large cardamom where production levels are fairly high. Government also proposes to cover these products under its Price Stabilisation Scheme.

17.5 A large production and processing may also provide the threshold for distribution as supplies at that level could be ensured. Since Sikkim has already emerged as the organic state in India, it is possible to build a brand Sikkim and both domestic and international markets could be explored. Support from India Brand Equity Fund (IBEF) operated jointly by the Department of Industrial Policy & Promotion and Federation of Indian Chamber of Commerce & Industry (FICCI) could also be considered. BCG has considered funding requirement for organic farming as under:

Table 17.2: Additional Funding required for organic farming²⁷

Sl. No	Activity	Amount suggested (over and above current MOVCD proposal)
1	Assistance in farming inputs	Rs. 33 crore
2	Training and Certification	Rs. 10 crore
3	Collection, aggregation and grading	Rs. 4 crore
4	Setup of processing units for turmeric and buckwheat	Rs. 10 crore
5	Packaging, storage and transportation	Rs. 4 crore
6	Branding promotion and marketing	Rs. 42 crore
7	Administrative expenses	Rs. 4 crore
	Total	Rs. 105 crore

17.6 There would be a need to focus on increasing yield levels for these crops, have a niche market where products could be sold as branded/quality products and premium value added products are developed. One critical constraint in raising productivity of organic crops and other crops in general is the expansion of irrigation facilities, which Sikkim's topographical structure does not permit easily.

17.7 Sikkim, even though has abundant water resources, irrigation programmes have constraints, largely imposed by its very geographic nature. Assured irrigation not only improves the yield levels, but make it possible for year round cultivation.

²⁶"India Organic Sector: Vision 2025", Yes Bank, Ingenus Strategy and Creative Research

²⁷Report of the BCG Consultants

Sustainable production, while framing schemes/programmes, should keep these constraints in mind. Government has already been implementing the programmes of soil testing, identifying nutrient deficiency, recommending the best nutrient mix for the farmers. Losses from production stage to ultimate consumer are also attended through construction of godowns on scientific lines, a well designed MIS to effectively match supply and demand schedules, public awareness about reduction of wastage and these are proposed to be continued. Sikkim is already favorably placed in terms energy use per unit of output²⁸.

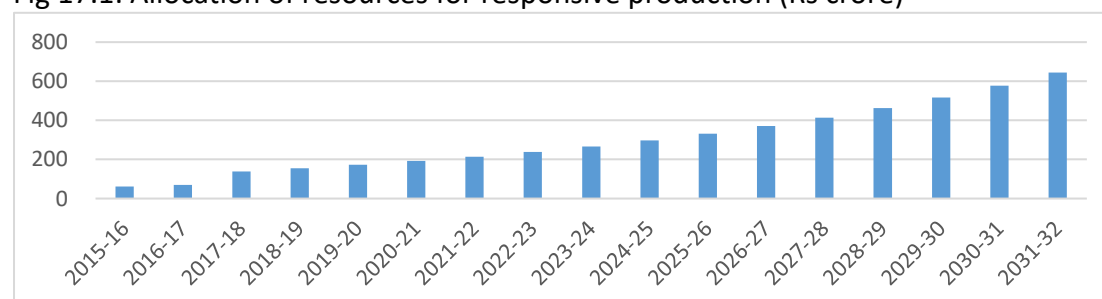
Box 17.2: Constraints in Implementing Irrigation Programmes

- The development cost per ha for minor irrigation scheme to be eligible for funding is less than Rs. 1.5 lakh according to guidelines under the AIBP. The provision is inadequate considering the hilly terrain where costs of construction are higher, and needs to be revised by the Ministry of Water Resources to at least Rs. 2- 2.5 lakh per hectare.
- Since most of the schemes apply to a CCA of less than 20 ha, the State has asked the Centre to reduce the norm to 5 to 10 ha, so that more schemes can be initiated and small and marginal farmers can also benefit from the flagship programme. For example, the norms of the Command Area Development (CAD) programme require a minimum of 100 ha of CCA for the scheme to qualify. However, in a hill state like Sikkim, minor irrigation works taken up under AIBP are usually between 20-30 ha, and it is impossible to find projects to qualify for CAD schemes.

17.8 Per capita consumption in Sikkim is already very low and with increased income that would keep on increasing. Responsive consumption, therefore, concerns more with reduction of wastage rather than reducing the absolute level.

17.9 Overall allocation for responsive production and consumption is projected to increase from Rs. 138 crore in 2017-18 to Rs. 645 crore in 2031-32, showing an average annual growth of 11.6 per cent (Fig 17.1).

Fig 17.1: Allocation of resources for responsive production (Rs crore)



²⁸Chapter 12- Affordable and Clean Energy Figure 12.1

17.10 Three sectors/activities have been considered under this SDG, comprising agriculture, animal husbandry & fisheries and the organic farming. All these are production related and are instrumental in sustained production which at the same time is responsive to current and future needs (Table 17.3).

Table 17.3: Resources Proposed for Responsive Production (Rs crore)

Year	Agriculture	Animal Husbandry & Fisheries	Organic Farming
2015-16	19.06	5.51	36.82
2016-17	52.45	5.40	11.65
2017-18	59.27	6.98	71.95
2018-19	65.70	8.34	80.52
2019-20	72.83	9.34	90.12
2020-21	80.75	10.48	100.90
2021-22	89.54	11.76	112.98
2022-23	99.29	13.20	126.54
2023-24	110.11	14.84	141.75
2024-25	122.13	16.69	158.82
2025-26	135.48	18.78	177.98
2026-27	150.30	21.14	199.48
2027-28	166.75	23.82	223.61
2028-29	185.03	26.84	250.71
2029-30	205.33	30.26	281.13
2030-31	227.89	34.13	315.29
2031-32	252.94	38.51	353.65

17.11 As with the other goals, capital expenditure are not built in these projections. Similarly, as reduction of wastage at all stages of production to consumption are covered under SDGs, the same has not been included.

Chapter 18: Goal 13- Climate Action

India is a signatory to the global convention relating to management of climate and committed to take actions as per the mandate of the convention that relates to India. Government of Sikkim is committed to ensure conservation, restoration and sustainable use of its forest and water resources and adopt management practices which lead to halt deforestation, restore degraded forests and substantially increase afforestation. As outlined in the SDG, it is the endeavor of the Government to take actions as may be necessary for fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources to everyone. The State would attempt to integrate ecosystem and biodiversity values into its development processes and poverty reduction strategies.

18.2 Sustainable development and climate are inseparable and need to be considered together. Climate action is particularly relevant for Sikkim in terms of its topography and physiological characteristics. Sikkim has Bio diversity Board Act for utilisation of its biological reserves (Box 18.1).

Box 18.1: The Sikkim State Biodiversity Board Acts and Rules

The Sikkim State Biodiversity Board (SBB) was set up in 2006 to implement the objectives of the Biological Diversity Act, 2002 and Sikkim Biological Diversity Rules, 2006. Under the Act and Rules, the Board is required to perform the following duties:

- Constitute biodiversity management committees (BMCs) in every local body of the State
- Document the diversity of life and its associated knowledge and practices in the form of a people's biodiversity register (PBR), throughout state to ensure effective management, promotion and sustainable use thereof
- Regulate commercial utilisation, bio-survey and bio-utilisation of biological resources in the State
- Coordinate activities, provide technical assistance and guidance to BMCs, enable the use of biodiversity, bio-survey and bio-utilisation and other relevant subjects
- Collect, compile and publish technical and statistical data, manuals, codes and guidelines relating to the conservation of biodiversity, sustainable use of its components, and fair and equitable sharing of benefits arising out of their use and knowledge
- Undertake physical inspection of areas in connection with the implementation of the Act. This documentation work through the PBR is the most prioritised area of work of the SBB and would provide baseline data for ongoing/upcoming bio-technological, pharmaceutical and related industries
- Check bio-piracy in the modern intellectual property rights (IPR) regime. The Board needs to initiate this activity at the panchayat/block levels. In Sikkim there are 166 gram panchayats and 26 block administration centres (BACs), so the SBB has to equip itself with adequate infrastructure and manpower to tackle this task

18.3 Some of the initiatives that are proposed for climate related actions are the following:

- To convert State into scientific temperament zone to uplift society and to achieve sustainable development
- To make society in Sikkim climate resilient and environment friendly- melting glaciers forming glacial lakes which often burst causing large scale devastation in downstream areas
- In areas of technology transfer and ecotourism foster innovation and preservation of rich traditional knowledge
- Set up a Sikkim state remote sensing application centre for mapping and land use pattern for area specific development strategy
- Have a Biotechnology division to undertake and support biotechnology based research for food security and economic upliftment, use of barren and unutilised land mass, development of high yielding varieties of crops through traditional and genetic breeding, bio-fertilizer, identifying suitable varieties of trees, including the fruit bearing ones to improve nutritional levels.

18.4 Targets set under this SDG are summarised in table 18.1 below:

Table 18.1: Actions to combat climate change and its impacts

3 YEARS	7 YEARS	15 YEARS
To undertake a high resolution climate change vulnerability assessment and mapping to identify the vulnerable areas and people living in those areas	Identifying the adaptations options	To strengthen the means of implementation and revitalize the global partnership for sustainable development.
Implementations of programme of building climate change resilient infrastructures and providing sustainable livelihood options by involving line departments.	Technology options will be worked out in consultation with R&D institution for ensuring higher economic output through labour intensive sectors	
Mapping of vulnerable areas in terms of climate change induced hazard including Landslides, cloud burst, forest fires, drought etc.	Promotion of sustainable agricultural research for introduction of climate change resilient crops	
Value addition of organic products of the state to be taken under public private partnership(PPP) mode.	Encourage taking up innovative and pioneering research for promotion of new technologies and transfer at the ground zero.	
To initiate R&D activities to ensure sustainable consumption and production and minimizing	Capacity building programme involving NGOs, Voluntary Organisations, women, youth	

the use of natural resources and toxic materials	and local communities to be taken up	
Make research based recommendations on climate related disasters and Support Government in planning strategies for urgent actions.	Measures for conservation of Aquatic ecosystem	
Installation of Early warning systems and dissemination of information for disasters	High resolution land degradation mapping and implementation of feasible resources on the degraded land	
Public awareness programme on climate change already initiated under State Climate Change Cell to be further strengthened	Promotion of research on impact of climate change on fragile ecosystem	

18.5 Climate action operates at the level of production covering primary and secondary sectors, consumption and delivery of products and services and the underlying objective is to meet the increased while sustaining the ecological balance. There are programmes already under implementation relating to integrated watershed management, forest conservation, social forestry and fodder development and research for ecological regeneration, which needs to be strengthened and used more effectively. Overall resources that are proposed for these activities is projected to increase from Rs. 118 crore in 2017-18 to Rs. 570 crore in 2031-32. Forest conservation and ecological regeneration are the two critical components of the overall vision programme under climate change. Outlays proposed for the broad interventions and initiatives under this SDG are indicated in table 18.2. :

Table 18.2: Resources Proposed for Action Under Climate Change Initiatives (Rs. Crore)

Year	Integrated Watershed Management	Forest Conservation	Social Forestry & Fodder Development	Environmental Research & Ecological regeneration
2015-16	6.3	2.5	4.9	19.9
2016-17	26.1	34.3	7.6	37.7
2017-18	7.0	33.3	5.1	62.5
2018-19	7.9	36.7	5.6	71.2
2019-20	8.8	40.3	6.1	81.1
2020-21	9.9	44.3	6.7	92.4
2021-22	11.1	48.8	7.4	105.3
2022-23	12.5	53.7	8.1	120.0
2023-24	14.0	59.0	9.0	136.8
2024-25	15.8	64.9	9.9	155.9
2025-26	17.7	71.4	10.8	177.7
2026-27	19.9	78.6	11.9	202.5
2027-28	22.3	86.4	13.1	230.8
2028-29	25.1	95.1	14.4	263.1

2029-30	28.2	104.6	15.9	299.8
2030-31	31.6	115.0	17.5	341.7
2031-32	35.5	126.5	19.2	389.5

18.6 The climate change initiatives would largely be implemented by the Department of Forest, but there will involvement of other Departments and the community at large. Success of climate change initiatives, besides the resources, would depend on community support as they are the key stakeholder.

Chapter 19: Goal 15- Life and Land

Sikkim is richly endowed with natural resources. Its location along the slopes of the Himalayan ranges, from the lowest reaches to sub-alpine heights, coupled with its abundant monsoon, make it home to five agro-climatic sub-zones, and have given rise to tremendous bio-diversity conducive to the cultivation of a wide variety of crops, agricultural, horticultural and medicinal, and the rearing of a variety of livestock breeds. A large proportion of its area is under forest cover (nearly 80 per cent), although only half of this constitutes very dense forest (lowest among the North-eastern States), and there exists only a small potential for exploiting timber commercially. It is home to a wide variety of floral species - more than 4,500 flowering plants, 550 species of orchids and 36 species of rhododendrons.

19.2 Over the past decade Sikkim has taken a pro-active environmental stance by implementing various laws to preserve its natural habitats, such as the Forest Conservation and Wildlife Conservation's Acts, and a Biological Diversity Act, and has involved the local communities as well as remote sensing and geo-informatics systems in forest management. Sikkim's hot springs have high sulphur content and are famous for their medicinal and therapeutic value. Streams and rivers fed by snowy mountains, cascading down the hill slopes, provide the State with the potential to generate at least 8,000 MW of hydro power, of which around 6,000 MW of generation projects are in various stages of progress. This is non polluting and is not based on fossil fuels and hence non exhaustive.

19.2 The life and land related SDG has two objectives. The first one is to sustain the harmonious coexistence of human settlement with the nature and preserve its serenity. The second is to derive economic benefits from this, by developing in a manner that it can both be preserved, appreciated and generate economic returns to the State and the community. It is with objective in mind, development of tourism has been included as a part of sustaining life while preserving the basic nature of the land.

Development of tourism

19.3 Development of tourism is consistent with the ecological concerns of the State and offers abundant opportunities for employment, income generation and sustainable development. Sikkim has announced a Mission Statement for Tourism in 2015 (Box 19.1)

19.4 Tourism concentrates on Sikkim's cultural heritage, natural beauties, religious and mythological linkages and adventure tourism. 12 projects have been identified under tourism: Eco Tourism & Bovine Park; Artificial Rock climbing; Tantra, Mantra & Yantra Centre; MICE (Meetings, Incentives, Conventions & Exhibitions) Centre; Ramayana Eco Villages; Reptile park; Rishi Kutirs; International Standard Golf Course; Yak Golf Course; Monasteries & Temples; Sky Walk; and Boating.

19.5 Tourism is envisaged to be built on the themes so that high value tourists could be attracted for a relatively longer stay. The investment would be selective and with high visibility and would be fully coordinated with private operators with Government providing the enabling infrastructure and connectivity. BCG has identifies four themes of Religious; Nature/Adventure; Yoga/Wellness; and others like Business, Recreation around which the tourism initiatives of the State could be built. Close to 0.71 Million tourists visited Sikkim in 2015, generating more than 500 Crore revenue for the state. We believe that going forward Sikkim should target higher end tourists with longer stays while continuing to grow traffic at a moderate rate of 10 per cent annually. Sikkim could potentially generate Rs. 1,500-2,500 Crore as tourism revenue by 2021 and more than double this amount in next 10 years.

Box 19.1: Tourism Mission 2015: Mission Statements

1. The State government endorses the sector as the main civil industry in the State
2. The promotion of sustainable tourism and encouraging the private sector to develop tourism-related infrastructure and services without disturbing the environment
3. Establish and strengthen the Institution of Network of Stakeholders (INS) which is government led, private sector driven and community welfare oriented.
4. Recognise the deep-rooted relationship between tourism and culture, traditions, monuments, heritage, natural resources, environment, forests, wildlife and ecology,
5. Establish effective linkages with interlinked departments and agencies, such as transport, roads, culture, etc.
6. Provide a conducive environment for public and private sector collaboration and investment, through facilitation, concessions, etc.
7. Sustainability is the guiding star, and tourism will be a pollution-free industry with a 'soft' ecological footprint.
8. Eco-tourism will be promoted for its social and economic objectives
9. A special thrust will be given to village and rural home stays for adventure tourists and all forms of tourism as far as possible
10. Tourism will be responsible and involve the local community in the development and management of the tourism destination
11. Policies and declarations made at various summits for the development of the north eastern region will be implemented
12. Tackle the main constraints of poor connectivity and inadequate tourist facilities
13. Domestic tourism which focuses on pilgrimages, culture and tradition, wellness, etc will be the focus initially
14. Sikkim will be promoted as an organic state along with its locally produced organic products and local cuisines
15. The tourist industry, hotels and travel agents will be persuaded to evolve and voluntarily adopt a Code of Ethics with punitive action for infringement
16. Tourism and tourism products will be marketed domestically and abroad in a well-planned manner

19.6 BCG has suggested that Sikkim should consider investing in the following initiatives as detailed below (table 19.1).

Table 19.1: Tourism initiatives and funding required

Lever	Key initiatives	Details	Funding required
Themes and offerings	Selectively invest in strategic/ high visibility projects	Repair/ renovate monasteries / temples that are part of clusters/ are popular	Rs. 1,400 Cr
		Develop strategic/ low complexity projects – Sky Walk, boating, and reptile park	
	incentivize private players to set up theme based activities	Provide capital subsidy for setting up Rishi Kutirs, Ramayana Eco-village etc.	
Marketing	Develop a state brand Enhance engagement with tour operators	Appoint top notch ad agency Brand ambassador with national appeal Conduct B2B events	Rs. 50 Cr
Connectivity and Stay	Incentivize airlines to fly to Sikkim from target markets	Underwrite seats during off-season, say 40%	Rs. 90 Cr
	Incentivize private players to set up properties in line with themes	Provide single window clearance, 10-year tax break and marketing support to high-end wellness retreats/ luxury camps	
	Total		1,540 Cr

19.7 Other than tourism, land and people deal with issues relating to effective management of waste, preserving eco system in such a manner that there is a balance between its use and regeneration. This is a dynamic process and there has to be an institutional mechanism which undertakes research, reviews implementation and fine tune policies on a continuous basis. Keeping these into consideration broad targets over different time frames have been identified and indicated in Table 19.2.

Table 19.2: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

3 YEARS	7 YEARS	15 YEARS
Implementation of pollution control laws more effectively by strengthening the SPCB and providing modern digital monitoring tools	Strengthen effluent treatment plants, modern digital monitoring tools, engage active local NGOs for monitoring and recycling	Setting up of State level Forest Research Institute including biotechnology/GIS/Remote Sensing Centre/Climate modelling
Establish technologically sound solid waste management,	Effectively implement Forest Conservation related	Increase of Forest cover and improvement in forest quality.

sewage treatment and emission control mechanism.	initiatives, including the relevant Acts	Implementation of REDD+ project. (under development)
Introduction of fuel saving devices and alternate energy sources	Regulate the use of natural water by industries and commercial establishments. Promotion of environment smart housing primarily in forest fringe areas	Establishment of Wildlife Crime Control Cell, Strengthen Wildlife establishment including forensic labs, wildlife intelligence, etc.
Provide hazardous waste disposal facilities including recycling/reusing.	Undertake massive awareness campaign especially in educational institutions both directly and through electronic media/street plays, etc; setting up of a network of environment interpretation centres	Conducting research/surveys for long term monitoring for management purposes. Strengthen Wildlife Conservation in protected areas and forest reserves
Development of carrying capacity protocol of all eco tourism areas & tools for monitoring environmental & socioeconomic impacts	Development of State Level Jurisdictional REDD+ Program for possible international funding for carbon credits	Establishment of plant and animal quarantine facilities
Inclusion and recognition of proposed Ramsar Sites for wetlands for implementing biodiversity conservation initiatives	Implementing biodiversity conservation initiatives through strengthening Biodiversity Management Committees. Development & value addition of Non Timber Forest Produce.	Compensation based on eco system services and forest cover. Institute a mechanism for providing funds for forest & wildlife based on valuation of eco system services
Tourism Development consistent with the Mission Statement	Have an institutional arrangement to review progress of all initiatives under this SDG	

Resources

19.8 The instruments for achieving the targets indicated above are spread across many sectors and there is an overlap. The intervention concerning forest conservation, afforestation and the reversal of the trend of desertification and land degradation are already included in the SDG relating to climate change. In view of this resource allocation considers only wild life preservation, disaster management and relief associated with it to redress the difficulties faced by the residents and tourism. Overall resources, other than for the purpose of capital formation and physical assets creation, is projected to increase from Rs. 90 crore in 2016-17 to Rs. 410 crore by 2031-32. The allocation in terms of the broad interventions/initiatives is indicated in Table 19.3.

Table 19.3: Allocation of Resources for Tourism promotion, wild life and disaster management (Rs crore)

Year	Wild Life Preservation	Relief on Account of Natural Calamities	Promotion and Publicity of tourism
2015-16	10.2	69.9	2.9
2016-17	13.1	82.2	2.2
2017-18	11.2	84.2	3.6
2018-19	12.4	92.6	5.0
2019-20	13.6	101.9	10.0
2020-21	15.0	112.1	11.0
2021-22	16.5	123.3	13.0
2022-23	18.1	135.6	14.5
2023-24	19.9	149.1	16.0
2024-25	21.9	164.1	18.0
2025-26	24.1	180.5	20.0
2026-27	26.5	198.5	22.0
2027-28	29.2	218.4	24.0
2028-29	32.1	240.2	27.0
2029-30	35.3	264.2	30.0
2030-31	38.8	290.7	33.0
2031-32	42.7	319.7	37.0

19.9 Sikkim is fully committed to preserve its ecology, biosphere and ensure its use in a manner which while ensuring its sustainability provide livelihood options to its residents. These two objectives, from inter-temporal consideration are not contradictory, rather supportive. The policies and programmes, therefore, harness these resources in a way that does not endanger the space and scope for future generations.

Chapter 20: Goal 16- Peace, Justice & Strong Institutions

Economic development can take place in an environment of peace and a comfortable law and order situation, because that provides the necessary condition for innovation and initiative. It also requires that rule of law prevails and there is guarantee of property rights to be honored and enforced. The vision of the State is, therefore to promote rule of law and ensure equal access to justice and a forum for consideration of their grievances. The State aims to end all exploitation and violence, reduce corruption at all levels, provide legal identity to all its residents and guarantee them freedom as provided under law.

20.2 Strong Institutions not only facilitate the process but improve the comfort level of investors. The SDGs recognise the need for peace, justice and existence of strong institutions. The target set under this SDG over different time frames envisaged is indicated in Table 20.1.

Table 20.1: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

3 YEARS	7 YEARS	15 YEARS
Reduce all forms of violence related deaths - regular patrolling around the clock	End abuse, exploitation and torture of children, women and other marginalised sections of society	Stop illicit financial and arms flow - checking by the police.
Transparency at all levels	Institutional arrangement for continuous review and assessment of training and modernisation needs	Have a responsive and agile administration and police force
Reduce corruption and bribery		
Have training of police and other personnel including modernisation of the administrative apparatus		
Make Aadhar as the platform for all transfers from the State to individuals		

20.3 Rate of cognizable crimes (covering all crimes under Indian Penal Code and the State Laws) sharply declined in Sikkim relative to both its own record and also relative to the national average (Table 20.2). However, for certain categories, particularly the crime against children, rate at 5.4 crime per one lakh population in Sikkim in 2011 (average of 2010-12) was higher than the national average of 2.37

during the same period. Similarly, crime rate against scheduled tribes at 1.27 per lakh population in 2011 (average of 2010-12) was higher than the national average of 0.50²⁹.

Table 20.2: Rate of Cognizable Crimes (per 100,000 population)

Sikkim/ All India	Special & Local Laws				Indian Penal Code			
	1981	1991	2001	2011	1981	1991	2001	2011
Sikkim	1452	79.8	33.6	23.1	91.4	111.1	82.3	99.8
All India	346	401.7	348	365.2	200.3	195.4	172.8	187.1

Source: Rajeev Malhotra- India Public Policy Report , 2014 & National Crime Record Bureau, 1981, 1991, 2001 and 2011

20.4 A related issue on peace and justice is the rate of disposal of cases. The proportion of cases disposed off (resulting in acquittal or conviction) for special and local laws in Sikkim were 57 per cent in 2011, as against the national average of 45 per cent. In cases relating to Indian Penal Code, conviction and acquittal of 20 per cent in Sikkim was better than the national average. The proportion of pending cases, both for the local laws and under Indian Penal Code was also lower. But the disturbing thing is that the pendency has been on rise (Table 20.3)

Table 20.3 Proportion of SLL and IPC Crime cases Disposed by Court (per cent)

Sikkim / All India	Convicted/Acquitted			Pending		
	1994	2001	2011	1994	2001	2011
	Special and Local Laws					
Sikkim	69.3	84.3	56.8	19.4	15.7	42.9
All India	53.6	38.4	44.8	43.7	53.8	54.8
	Indian Penal Code					
Sikkim	28.3	48.4	19.9	68.8	46.7	73.1
All India	15.7	15.2	13.2	82.5	82.1	85

Source: Rajeev Malhotra- India Public Policy Report , 2014 & National Crime Record Bureau

20.5 While Sikkim has enjoyed peace relative to other States/Regions in the country, the Government is conscious of maintaining this environment through regular patrolling, involvement of local communities and adequate man power. It is conscious of making all its formations accountable to people with proper roles defined and responsibilities fixed. A transparent, non discriminatory and responsive administration and justice (quick and proper) has been its administrative priorities.

20.6 Sikkim is a large area relative to its population with international borders, which to an extent are porous. The police strength of Sikkim, therefore, needs to be adequate, trained and equipped. The current strength of police force in Sikkim relative to its area and population and the national averages is indicated below (Table

²⁹Rajeev Malhotra- India Public Policy Report , 2014 & National Crime Record Bureau, 1981, 1991, 2001 and 2011

20.4). Police strength in Sikkim has increased faster relative to the national average in both the parameters of assessment and one can say that in terms of numbers, perhaps it is converging to the desired levels.

Table 20.4: Police Strength

	Number of Police personnel per 100 sq km				Number of police personnel per 10000 population			
	1981	1991	2001	2011	1981	1991	2001	2011
Sikkim	23.3	33.5	57.1	62.7	54.0	59.0	75.0	73.2
All India	27.3	35.1	41.3	52.4	13.1	14.0	13.7	13.7

Source: Rajeev Malhotra- India Public Policy Report , 2014 & National Crime Record Bureau

Resources

20.7 Resources under this SDG has been considered for training and modernisation of Government employees, modernisation and training of police personnel and for home guards, civil defence, check posts and fire fighting, etc. Overall allocation under these three broad categories is indicated below (Table 20.5).

Table 20.5: Resources estimated for modernisation and training of administration

Year	Training & Modernisation	Peace & Protection	Police Modernisation & Training
2015-16	1.82	20.79	6.49
2016-17	3.50	22.17	3.91
2017-18	3.19	21.75	8.98
2018-19	3.51	23.81	9.37
2019-20	3.86	25.61	9.81
2020-21	4.25	27.56	10.29
2021-22	4.68	29.69	10.82
2022-23	5.14	32.00	11.40
2023-24	5.66	34.51	12.04
2024-25	6.22	37.24	12.74
2025-26	6.85	40.21	13.52
2026-27	7.53	43.45	14.37
2027-28	8.28	46.97	15.30
2028-29	9.11	50.80	16.33
2029-30	10.02	54.97	17.47
2030-31	11.03	59.51	18.71
2031-32	12.13	64.46	20.09

20.8 Since Sikkim has international borders, part of expenses on check posts and civil defence is met through grants from Centre. These have been included in the above assessment as the expenditure is finally accounted for in the State's financial statements.

Chapter 21: Goal 17- Participation for the Goals

SDGs are for people and without their participation these cannot be accomplished. Participation ensures that the goals are achieved and people see them as being realised. State intends to strengthen the communication networks so that shortcomings are communicated immediately for any corrective action that may be called for. It will develop such an infrastructure based on international best practices and seek collaboration through Asian Development Bank or any other institution. The Time frame and goals in terms of this time frame is indicated in Table 21.1.

Table 21.1: Strengthen the means of implementation and revitalize the partnership with all stakeholders in sustainable development

3 YEARS	7 YEARS	15 YEARS
Introduce an internet based system of sharing of information and also communication of public grievances	Strengthen of telecommunication with the aid of private service producers partners	Develop infrastructure with assistance from National and International Agencies including the Asian Development Bank
Generate required data base for evidence based assessment of performance	Construction of mini HEPS	
Improve internet connectivity at household level		
Strengthen Local Bodies to become the effective intermediaries between the citizens and the Government		

21.2 The first pillar of implementation is the setting up standards against which progress could be measured. Second pillar is the institutional arrangement for collection of information and third is information flow from persons at large, the ultimate stakeholder.

21.3 The Department of Information Technology, Sikkim is working towards adopting technology to its highest and best use throughout Sikkim Government Department to improve the service delivery mechanism and also the system of feedback on its programmes/initiatives.

- The State Government has implemented various Mission Mode Projects (MMP), under the National e-Governance Plan (NeGP) namely State Service Delivery Gateway, e-District etc. Under the State Service Delivery Gateway online submission of applications for Medical, Dental, Engineering and Architecture studies and application for various scholarships under the Social Welfare departments have been carried out. The State Government has

launched the issue of e-certificates covering most of residents requirements under the E-District Project.

- The State has successfully implemented the Cyber Village pilot project, at 23-Melli Dara Paiyong Gram Panchayat Unit (GPU) and is the 1st Cyber village in the country to have been successfully implemented. The State now aims to implement the Cyber Village in another 50 GPUs.
- The State Government has installed CCTV based surveillance system at two check post at Rangpo and Melli. In order to make the State safe CCTV surveillance system is extended at the remaining check posts like Raman , Rishi, etc.
- In line with the Green Mission of the Hon'ble Chief Minister the State government has setup an e-waste collection centre at the GMC premises. The collection centre will serve as a store house for all the e-waste generated (which has no resale value in the local market) in all government departments and private organizations in the State.
- The Government of India's move to incentivise the digital payments through various modes, the State government has over the years made efforts to move from the conventional method of payments to the digital payments. Out of the 6,75,786 enrolled under the Aadhaar a total of 5,90,783 Aadhaar cards have been generated as on 15th April 2017. With a Tele-density of 87%, Sikkim is well-positioned to achieve the objective of Smart State.
- The electronic network could become an ideal mode of getting feedback from residents about the quality of service and what are their expectations from each programme. Planning eventually has to follow a bottoms up approach where the expectations of individuals could be factored in. While local bodies also act as the intermediaries and catalyst for conveying these aspirations, there is nothing better than the personal response.

21.4 Sikkim has embarked on a major programme of making internet available at doorstep of households. The number of household who have computer at their residence and also an internet connection (Table 21.2) reveal that computer access is with only 19 per cent of rural and 47 per cent of urban households, though better than national average, but below the threshold that should provide the comfort level for proper feed back. Similarly, internet penetration, though better relative to the national average, but nonetheless needs to be better.

Table 21.2 Number of Households (per 000) with Computer and Internet Connection based on Quintile class of Monthly per capita Consumption Expenditure (MPCE)

Based on Quintile class of Monthly per capita Consumption Expenditure (M-CE)						
States/ All India	Quintile Class of MPCE					ALL
	1	2	3	4	5	
Availability of Computer in Rural Areas						
Sikkim	36	77	165	248	302	193
Goa	314	398	215	501	806	464
all-India	9	24	38	48	157	62
Availability of Computer in Urban Areas						
Sikkim	152	518	283	604	643	470
Goa	469	298	476	471	778	529
all-India	61	108	204	318	580	292
Internet availability in rural areas						
Sikkim	115	66	311	231	386	250
Goa	478	378	206	504	839	486
all-India	49	71	116	163	336	161
Internet availability in Urban Areas						
Sikkim	386	578	458	701	775	608
Goa	359	122	491	728	735	526
all-India	193	297	448	550	749	487

Source- NSSO Survey on Education, 2014

21.5 Resources for this SDG cover information and publicity, national E governance action plan, Data & Statistics and support to local bodies. Overall resources are projected to increase from Rs. 90 crore in 2017-18 to Rs. 450 crore by 2031-32 as indicated in table 21.3.

Table 21.3: Resources Proposed under SDG on participation for goals

Year	Information and Publicity	National E-Governance Action Plan (NeGAP)	Strengthening Data & Statistics	Support to Local Bodies
2015-16	6.34	4.36	1.36	38.80
2016-17	12.86	15.63	3.54	58.64
2017-18	12.09	14.48	2.57	66.49
2018-19	13.30	15.93	2.90	74.67
2019-20	14.63	17.52	3.26	83.85
2020-21	16.09	19.27	3.67	94.16
2021-22	17.70	21.20	4.14	105.74
2022-23	19.47	23.32	4.66	118.75
2023-24	21.42	25.65	5.26	133.36
2024-25	23.56	28.22	5.93	149.76
2025-26	25.92	31.04	6.69	168.18
2026-27	28.51	34.14	7.54	188.87
2027-28	31.36	37.56	8.51	212.10
2028-29	34.50	41.31	9.61	238.19
2029-30	37.95	45.44	10.85	267.48
2030-31	41.74	49.99	12.25	300.38
2031-32	45.92	54.99	13.84	337.33

21.6 Participation of citizens develops faith in the Government and the reciprocity generated constructive discussions with an outcome which is a win win for all.

Chapter 22: Institutional Arrangement For Monitoring & Reporting

22.1 A two stage reporting process has been envisaged for SDGs implementation and monitoring. At the level of the Department responsible for implementation of the Goal, there would be continuous monitoring of implementation. It will not only have reporting on identified parameters with a specified time table, there will be concurrent monitoring of implementation. At the second stage, Directorate of Economics, Statistics & Monitoring is being strengthened to provide regular independent feedback based on their information flow. The Directorate is also examining the feasibility of a modified livability assessment which provides the necessary measurement tools for assessing the progress over time, in relation to the targets and also comparative to other localities including inter-se SDGs. Together with mainstreaming of SDGs for the development and resource allocation, a well structured reporting (both in house and at an arm's length) will provide the required institutional set up for SDGs implementation and their effectiveness.

22.2 The Report had earlier suggested setting up of a Fund for incentivising the better implementing agencies in rural and urban areas. The four pillars of the liveability index that would form the basis for allocation from this fund are proposed as access, affordability, operation and the perspective. It is in a way similar to the index developed by the Ministry of Urban Development, which has four pillars- Institutional, Social, Economical and Physical and has assigned equal weights to all the four pillars. Within each pillar, there are core and subsidiary indicators. Though it may be possible to use the same indicators for ranking urban areas, but these indicators capture the current status and not the rate of progress. The index is, therefore, proposed as an improvement index which rewards better performance relative to others. Further, it may be desirable to have differential weights to each pillar. Final index exclusive for use in Sikkim may, therefore, be developed in consultation with the stakeholders.