GOVERNMENT OF NAGALAND

Annual Administrative Report

Department of Soil & Water Conservation
Nagaland : Kohima

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2016-2017

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Upon this handful of soil our survival depends. Husband it and it will grow our food, fibre and fuel and surround us with beauty. Abuse it, the soil will degrade and collapse taking mankind with it.

Patrick Rever.

CONTENT

Thinking Globally
And
Acting Locally
In
Conserving Land, Water & Vegetation
For
Today and Posterity

I
GENERAL INTRODUCTION

The prevailing geo-physio-climatic condition and the agricultural practices of the people define the mandate of the Department of Soil & Water Conservation which is to conserve, develop and manage natural resources like land and water in a sustainable manner. This mandate of the Department, in the context of the ever increasing population and the prevailing global climate change scenario, is becoming more and more critical for all round sustainable development of the State. It is, therefore, pertinent and imperative to think globally and act locally so as to achieve sustainable food security, adapt and mitigate climate change and sustain healthy eco-systems not only for the present generation but also for posterity.

Towards this end, the Department of Soil & Water Conservation, Government of Nagaland has been taking up Soil and Water Conservation oriented activities to put land and water resources to optimum uses with special emphasis on increasing agricultural production and to sustain the increased production without adversely affecting the natural resources thereby sustaining a healthy environment. The Department acknowledges that conservation of natural resources such as land and water on sustainable basis is gaining more and more importance in the backdrop of ever increasing demand for food in the midst of alarming degradation of the indispensable natural resources and the noticeable climate change happening in the State of Nagaland. Negligence of such a very important aspect of development in a hilly state like ours which is receiving high annual rainfall with highly erosive surface water run-off potential alongwith extensive practice of shifting cultivation can cause irreparable damage to the indispensable natural resources thereby triggering devastating natural calamities of unimaginable magnitude causing untold hardship to the people.

Adoption of appropriate conservation technology is, therefore, thought to be imperative to achieve sustainable food security for all the people of the State; to mitigate or adopt to the inevitable climate change and to avert catastrophes such as drought, floods, famine etc; and to sustain healthy natural resources for posterity. Such has been the endeavour of the Department and building on the experiences and achievements of the previous years the Department continue various soil and water conservation oriented schemes during the year 2016-17 focusing on the identified problems and keeping in mind the long term policy and vision of the Department.

Identified problems:

The commitment and the endeavour of the Department is to bring about sustainable development in harmony with nature through optimum development and judicious utilization of natural resources by overcoming the following problems :-

1.Hilly natural terrain highly susceptible to soil erosion:

Geo-physiographically the State is highly susceptible to soil erosion as only 8.48% of the total geographical area of 16,579 Sq. Kms. can be considered plain and the rest are constituted by undulating and hilly terrain with altitude varies from 200m to 3840m.

2. High annual rainfall with excessive surface run-off during summer and drought like situation in winter:

The annual rainfall which varies from 150cm to 220cm can either be a blessing if properly harnessed or become a curse if allowed to flow freely as surface run-off. The high run-off water erodes top fertile soil and carries with it the valuable plant nutrients with it, making the soil less productive.

3. Extensive practice of shifting cultivation:

About 61% of the total households of the State practice shifting cultivation in about 1.00 lakh Ha. of land annually thereby exposing about 5.65% of the total geographical area of the state to soil erosion hazards. At this rate, it is estimated that over 70% of soil depletion, degradation of land and deterioration of water resources are due to extensive practice of shifting cultivation, without proper conservation measures. The net result is, low level of agricultural production per unit area with farmers remaining the poorest of the poor among the society and the vital land and its natural resources in peril.

Policy and vision:

The policy of the Department is, therefore, to develop, conserve and manage natural resources like land and water and to put them to optimum uses as per their capability and treating them as per their needs by adopting appropriate soil and water conservation measures in an integrated manner on watershed basis. This can ultimately lead to healthy environment, enhance productivity, stabilize people's economy and thereby ensure peace, progress and prosperity in the State.

Strategy and approach

The strategy and approach of the Department is :-

1. Strengthening and upgrading meteorology centres so as to monitor and document daily weather conditions and disseminate those information to the stake holders.

2. Strengthening soil survey, soil testing laboratories and cartography so as to establish an inventory of land resource as per capability for more realistic land use plans.

3. Capacity building on soil and water conservation by conducting pre-service, in-service and farmers trainings, farmers' participatory demonstrations etc.

6. Taking up water resources development and water conservation measures such as water harvesting embankments, dams, de-silting structures, rain water structures, farm ponds etc. for multiple purposes like irrigation, fishery etc. and for re-cycling of water resources and encouraging groundwater recharges.

4. Bringing more land under settled/permanent cultivation on sustainable basis through land development in the form of bench terracing, half moon terracing, contour bunding etc. for conserving moisture, reducing soil erosion, sustaining fertility and productivity of the arable land.

5. Reducing soil erosion and rehabilitating non arable land especially those catchment areas having potential to cause natural hazards to productive cultivable land, drinking water and irrigation sources etc through contour trenching, gully control structures, conservation forestry, agrostology etc.

6. Taking up water resources development and water conservation measures such as water harvesting embankments, dams, de-silting structures, rain water structures, farm ponds etc. for multiple purposes like irrigation, fishery etc. and for re-cycling of water resources and encouraging groundwater recharges.

7. Reclamation and amendments of soils of developed land for more productivity per unit area by carrying out pre-treatment soil test and application of soil amendments in required doses. Reclamation of acid soil with lime application is a priority.

The action slogan:

The Department, thus, with the action slogan, "**Scientific Development, Conservation and Management of Land and Water Resources for Sustainable Economic Development and Healthy Natural Environment of the State"** has been implementing various schemes/projects by taking up various soil and water conservation oriented activities, that is, land development in the form of bench terracing, half moon terracing, contour bunding, etc., for conserving moisture, mitigating soil erosion, sustaining soil fertility and productivity of arable land, and contour trenching, gully control structures, forestry, agrostology, etc.,on non arable land. Water conservation measures or water resources development structures such as embankments across streams and rivers, water harvesting ponds, etc., to mitigate flood, drought and soil erosion. Such structures arrest run-off water, check top soil erosion and contain stream bank erosion and flush floods. They do encourage slow percolation of water into the soil which recharges the perennial springs, stabilize water flow in the streams and rivers, ensure sustain irrigation, encourage luxuriant vegetative growth and promoting rejuvenation of flora and fauna.

Health of Natural Resources
Is
Vital to the Nation :
Our Natural Resources- Our Future

Administrative strength of the Department:

The Department is headed by a Parliamentary Secretary assisted by Commissioner & Secretary as the Administrative Head and supported by a full complement of ministerial staff at the secretariat level. While the set-up at the Directorate level is as under:-

1.	Director	1 no.
2.	Additional Director	1 no.
3.	Project Director	1 no.
4.	Joint Director	5 nos.
5.	Deputy Director	4 nos.(Directorate)
6.	Senior Soil Survey Officer	1 no. (Directorate)
7.	District Soil Conservation Officer	11 nos.
8.	Mechanical Engineer (Soil Cons.)	1 no.
9.	Sub-Divisional Officer	16 nos.(Soil Cons.)
10.	Soil Survey Officer	9 nos.
11.	Soil Chemist	1 no.
12.	Assistant Soil Conservation Officer (forest)	1 no.
13.	Assistant Soil Cons. Officer (Research)	1 no.
14.	Assistant Soil Conservation Officer (Engg.)	1 no.
15.	Sub-Divisional Officer (Mech./Soil Cons.)	1 no.
16.	Assistant Mechanical Engineer (Soil Cons.)	1 no.
17.	Assistant Engineer (Civil/Soil Cons.)/ Water Bodies	2 nos.
18.	Cartographer	1 no.
19.	Class – II Officers	72 nos.
20.	Registrar	1 no.
21.	Stenographer Gr.I	1 no.
22.	Superintendent	4 nos.
23.	Assistant Superintendent	4 nos.
24.	Ministerial staff	156 nos.
25.	Technical staff	285 nos.
26.	Grade – IV staff	199 nos.

SCHEMES IMPLEMENTED DURING 2016-17 AT A GLANCE

Sl. No	Name of the Scheme/Project	Outlay for 2016-17
A.	**STATE PLAN**	
1.	Soil Survey & Land Use Planning	9.00
2.	Nursery Development	5.00
3.	Integrated Watershed Management Project (IWMP)	40.00
4.	Disaster Management	3.00
5.	State Land Use Board (SLUB)	3.00
6.	Mechanized Land Development (MLD)	15.00
7.	Education & Training	5.00
8.	Capital Outlay (Buildings)	20.00
	Total:	**100.00**
B.	**SCHEMES UNDER EARMARKED SECTOR**	
9.	Integrated Land Development (ILD)	135.00
10.	Soil Erosion Control at Lower Chandmari, Kohima	65.00
	Total:	**200.00**
	Total (A+B):	**300.00**
C.	**SCHEMES UNDER NEC**	
11.	Development of WHP for Augmentation of Irrigation in Nagaland	111.11
12.	Watershed Management for Sustainable Agriculture Production and Improved Livelihood	111.11
13.	Watershed treatment for Flood Mitigation & Livelihood	100.00
	Total:	**322.22**
D.	**CSS SCHEMES**	
14.	Integrated Catchment Area Treatment (Flood Management Programme)-AIBP	1394.84
15.	Rashtriya Krishi Vikas Yojana (RKVY) Scheme	310.00
	Total (D):	**1704.84**

Integrated Watershed Treatment- The Right Approach in Sustainable Natural Resources Management

II
SCHEMES UNDER STATE PLAN

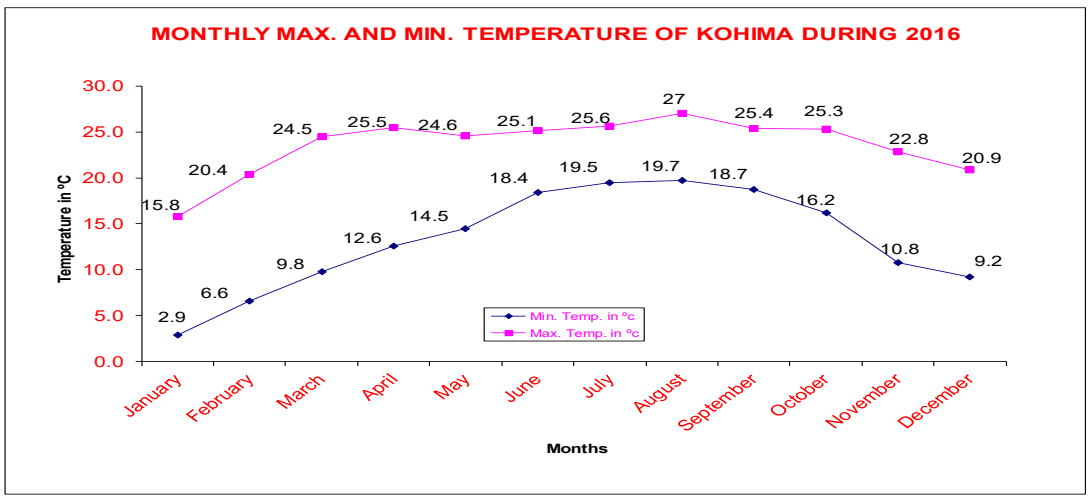
1. Soil Survey and Land Use Planning:

The Purpose of Soil Survey and Testing is to classify the land into various land capability classes so that the land can be put to various uses such as agriculture, forestry, horticulture, agro-forestry and other mixed land use system as per their capability. It involves multi- disciplinary and inter-related section viz. Soil Survey, Meteorology, Soil Testing, Cartography, Remote Sensing and Land Use Planning.

(a) Soil Survey- During the year 2016, Training programme on "Soil Health" was conducted for the field Assistants from four (4) Districts viz: Wokha, Zunheboto, Mokokchung & Tuensang. Another three (3) days training on 'Soil & Land Resource Inventory for Integrated Watershed Development' for the Officers and Assistants was conducted in collaboration with Soil and Land Use Survey of India, Kolkata, Government of India.

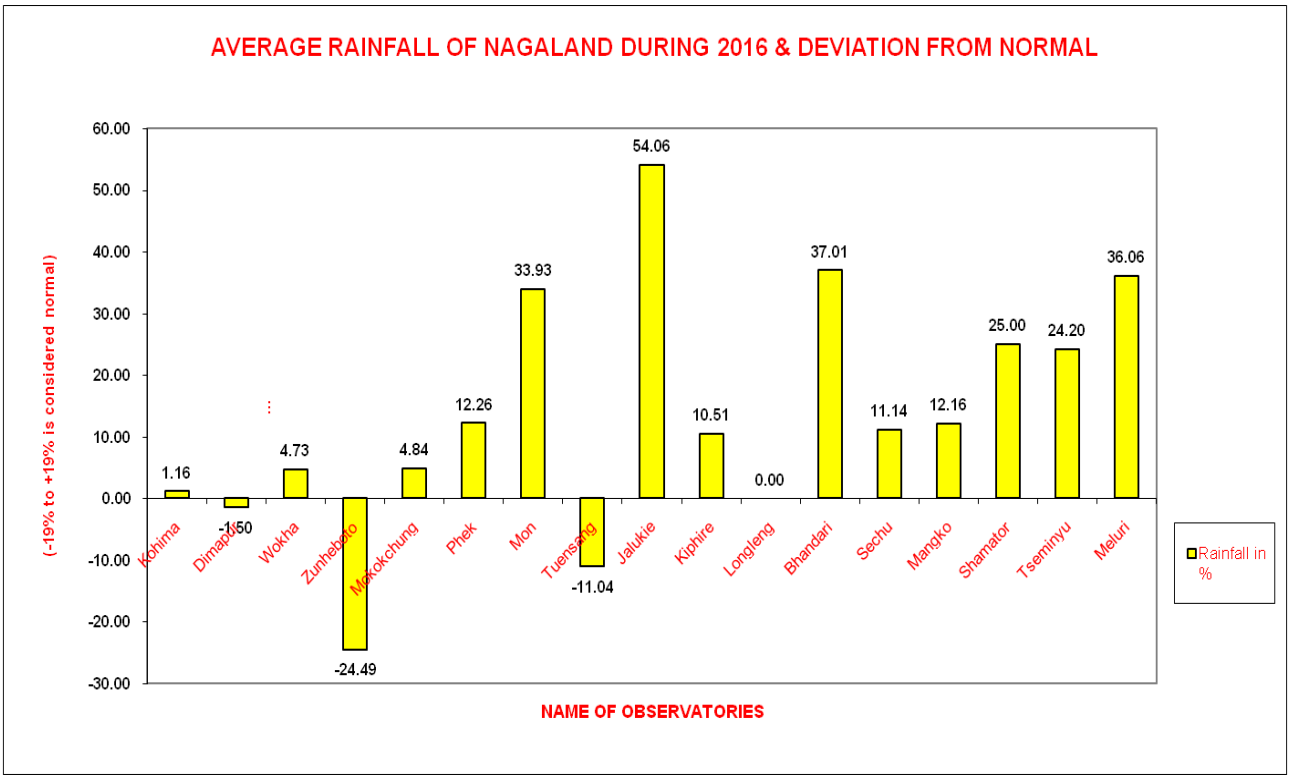
Participants with Resource persons of the Training held on Soil & Land Resource Inventory of Integrated Watershed Management during January 2017

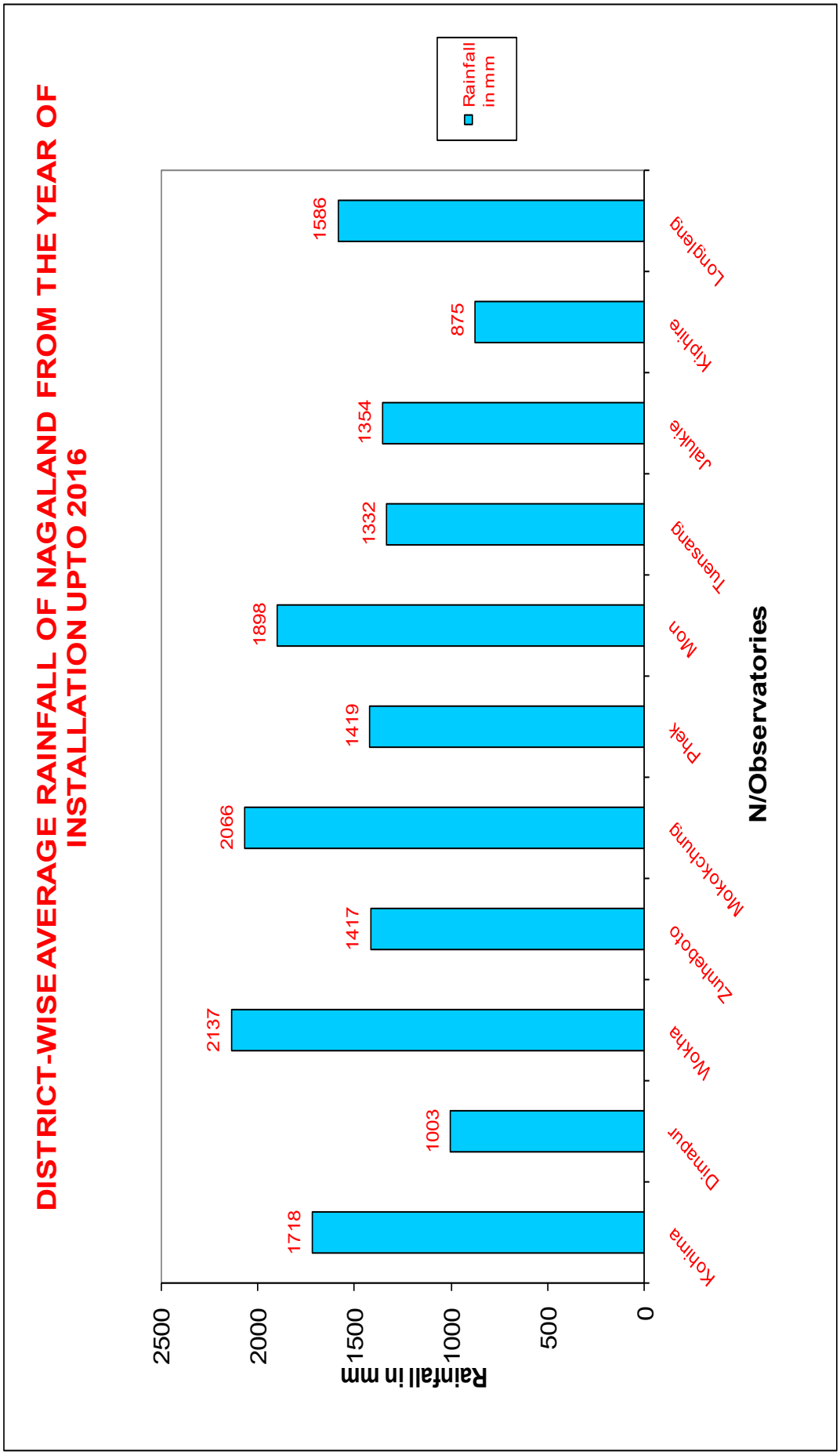
(b) Meteorology- The meteorological data received by the Department from Meteorological centres located at different altitudes of the State are being used not only by the land user department but also by the media viz, Doordarshan and local news dailies. The updated information on daily weather conditions are also available online at http:/ / wisngl.nic.genwis/genMonth.asp.

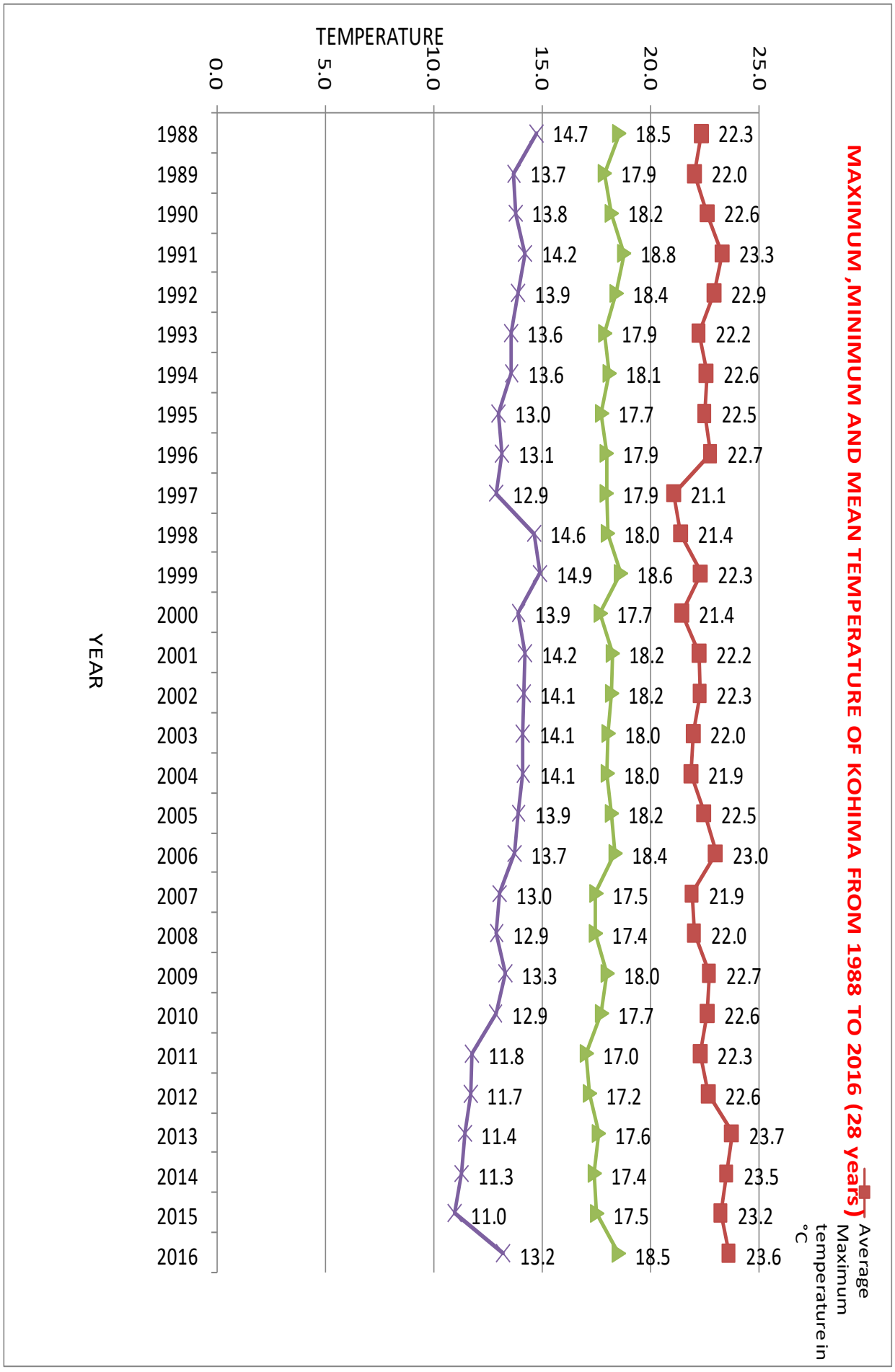


(c) Remote Sensing- The application of Remote Sensing Technology is indispensable in recent times in acquiring latest information on the earth's surface and its resources. Remote Sensing satellite data is multi- temporal, broad synoptic and compatible for digital manipulation and capable of generating multi- thematic maps for integrated planning and implementation. With the help of such data and satellite imageries the Department started to generate thematic maps information under Tizit Watershed areas during 2015-2016.

An amount of ` **9.00 Lakhs** is spent during the year 2016-2017 under Soil Survey and Land Use Planning scheme.




DISTRICT-WISE AVERAGE RAINFALL OF NAGALAND FROM THE YEAR OF INSTALLATION UPTO 2016
Rainfall in mm
2500
2000
1500
1000
500
0
Rainfall in mm
1718
1003
2137
1417
2066
1419
1898
1332
1354
875
1586
Kohima
Dimapur
Wokha
Zunheboto
Mokokchung
Phek
Mon
Tuensang
Jalukie
Kiphire
Longleng
N/Observatories


MAXIMUM ,MINIMUM AND MEAN TEMPERATURE OF KOHIMA FROM 1988 TO 2016 (28 years)
TEMPERATURE
0.0
5.0
10.0
15.0
20.0
25.0
YEAR
1988 14.7 18.5 22.3
1989 13.7 17.9 22.0
1990 13.8 18.2 22.6
1991 14.2 18.8 23.3
1992 13.9 18.4 22.9
1993 13.6 17.9 22.2
1994 13.6 18.1 22.6
1995 13.0 17.7 22.5
1996 13.1 17.9 22.7
1997 12.9 17.9 21.1
1998 14.6 18.0 21.4
1999 14.9 18.6 22.3
2000 13.9 17.7 21.4
2001 14.2 18.2 22.2
2002 14.1 18.2 22.3
2003 14.1 18.0 22.0
2004 14.1 18.0 21.9
2005 13.9 18.2 22.5
2006 13.7 18.4 23.0
2007 13.0 17.5 21.9
2008 12.9 17.4 22.0
2009 13.3 18.0 22.7
2010 12.9 17.7 22.6
2011 11.8 17.0 22.3
2012 11.7 17.2 22.6
2013 11.4 17.6 23.7
2014 11.3 17.4 23.5
2015 11.0 17.5 23.2
2016 13.2 18.5 23.6
Average Maximum temperature in °C

2. Nursery Development:

Nursery is a place where horticultural and forestry plants like fruit plants, ornamental plants, flowering plants, plantation plants and seedlings are raised, multiplied, propagated and supplied to growers. The importance of mass production of nursery plants is to distribute healthy pest and disease free plant materials amongst the masses that have little knowledge about the techniques of raising plants. Nursery also helps in introduction of exotic species and its multiplication. Mass production of nursery plants is the surest method of artificial regeneration on poor and barren sites.

The Department of Soil & Water Conservation has established nurseries in various districts and geographical location to cater the need of healthy planting materials to be planted in the departmental projects. In order to provide vegetative coverage in faster rate, sufficient quality of planting materials are required in close vicinity. In order to advocate plantation of cash crop and economic trees species in the project areas as well as in the abandon jhum field, the Department has started raising of economic and cash crop in the nursery.

Recently, the Department has adopted a policy to convert nursery activity into a revenue oriented program so as to upgrade the existing structures/facilities into high-tech nurseries. The Department has concentrated to raise, horticultural crops and economic trees species in those nurseries. The Department envisages to take up a noble scheme for road plantation drive all along the highways both state as well as National Highways. The concept and policies will be in comformity with the National policies on road plantation drive. The concept is to improve road stability including preventing landslides which is common phenomenon in the State resulting into road blockage for several days and leading to unknown economic losses to the public. This initiative will not only benefit from the scenic view but provide shelter from the rain during monsoon season and heat during summer. The project also includes planting of fruit trees and other economic species so as to draw/attract local people during maintenance period and protect them once they attain harvesting stage.

This scheme is to involve entire technically trained staff posted in all the districts covering the State. The existing infrastructure will help not only lessening the cost of planting materials for the project but provide healthy, less mortality and already acclimatized saplings to each and every district road.

At present there are 5 existing nurseries viz. Central Nursery at Seithekiema, Dimapur; nursery at directorate compound; district nursery at Wokha; district nursery at Chinmeleng, Tuensang; district nursery at Atoizu , Zunheboto; nursery at training centre , Sechu and 4 newly established nursery at Kuchera and Chozuba, Phek district; district nursery at Tuli, Mokokchung; district nursery at Chui , Mon and district nursery at Kiphire.

An amount of ` **5.00 lakhs** is spent to raise planting materials in the Department nurseries.

3. Integrated Watershed Management Project (IWMP):

Integrated treatment of watershed with appropriate soil and water conservation oriented technologies is one of the best approach in sustainable natural resources management for achieving sustainable agriculture without degradation of natural resources and in harmony with the environment. The scheme is, therefore, framed with the main objective to develop, conserve and manage soil and water resources on watershed basis mainly for sustainable agriculture without adversely affecting the environment. Under the scheme, a mini-watershed of about 200 Ha. area is to be taken up as a project in each R.D. Block. The scheme is being converged with MGNREGA with effect from the year 2014-15, that is, to take up land development and crops plantation activities in the selected projects. The list of projects under implementation during the 12th Plan period is given in Annexure- I.

out adversely affecting the environment. Under the scheme, a mini-watershed of about 200 Ha. area is to be taken up as a project in each R.D. Block. The list of projects under implementation during the 2016-17 is given in Annexure- I.

During 2016-17, an amount of ` **40.00 lakhs** is spent for development of 106 Ha of contour trenching and 25 units of WHP for settled/ permanent agriculture..

4. Disaster Management:

Nagaland is highly prone to multiple hazards. It falls under seismic zone V and is very susceptible to landslides. About 15,551 Sq.Km. of the geographical area is under landslide zone. Earthquake is also one of the major disasters which has been striking this region (small scale tremors) in recent times. Also frequent fires are being encountered in the State due to various reasons.

An amount of ` **3.00 lakhs** is anticipated to be spent for procurement of emergency equipments and maintenance of existing equipments during the year 2016-17.

5. State Land Use Board (SLUB):

The main objective of the SLUB scheme is to initiate healthy and scientific management of the State's land resources (Planning and monitoring). Imparting awareness on land resources and generation of action plan based on ground truth data collected from the field.

An amount of ` **3.00 lakh** is sanctioned during the year 2016-2017 mainly for the field data collection and thematic map information generation.

6. Mechanized Land Development:

Machines are becoming essential needs for development of physical field works, without which works could not be completed. Soil and Water Conservation Department's main objectives are conservation and protection of top fertile soils as well as existing available agricultural lands. For more productivity, different conservation measures are taking place which need heavy machineries. Presently, 2 nos. of Bulldozers and 2 nos. of JCBs are under operational conditions.

An amount of ` **15.00 Lakh** is spent during 2016-17 for the maintenance of these machineries.

7. Education & Research:

Soil and water conservation is an integral part of sustainable natural resources management and sustainable agriculture. Thus capacity building and human resources development in the field of soil and water conservation technology is of paramount importance particularly for hilly region like that of Nagaland. The Department, therefore, established its Research and Training Centre at Sechu, Kohima wherein the three categories of training viz; pre-inservice training for field level non-gazetted staff (Soil Conservation Assistant), in-service training and farmers training are conducted on regular basis. Study tours within and outside the State are also conducted in each of the training programmes. The Soil Conservation Assistant course is of 2 (two) years duration and 19 (nineteen) batches have passed out till date. In addition, some research and demonstration plots particularly on sustainable farming have been developed in the Centre. admission to under-go the two years pre-service Training Course.

Centre. Even the basic infrastructure such as administrative building, training hall, laboratories, hostels etc. are also been up-graded. At present there are 42 candidates undergoing the two (2) years pre-service Soil Conservation Assistant (SCA) training who are going to complete their training by 2018.

An amount of ` **5.00 lakhs** is spent under the scheme during the year.

8. Capital Outlay (Buildings):

The requirement for infrastructure has been a long felt need of the Department since the existing buildings are inadequate for smooth functioning of the Department. Most of the district and sub-divisional offices and quarters are in dilapidated and irreparable conditions necessitating new constructions. Moreover, with the creation of three more districts in the State, it has become imperative to construct District HQ office buildings, Officers and Staff Quarters in these districts.

An amount of ` **20.00 lakhs** is spent for construction of two Type-IV SDO(SC) quarters at Mangkolemba and Pughoboto during 2016-17 which is likely to be completed by next year.

Let us Endeavour
to let the
Water Work
Instead of Running

20th Batch SCA Trainees

Awareness Programme on Natural Resource Conservation held during the month of November 2016

Contour Trenching IWMP Moyiyong, Yakor vill.

Bench Terracing IWMP Kechinpyoung, Kuthur Vill.

IWMP Lang, Muthong

III
SCHEMES UNDER EARMARKED SECTOR

9. Integrated Land Development under Negotiated Loan (ILD):

Land and water are the two most vital natural resources for sustainable development for mankind. As land resources are limited and subject to competing usages, it is absolutely necessary that the land productivity is improved through sustainable and scientific management practices without impairing the ecological and environmental status. This approach is of paramount importance as Nagaland is predominantly a tribal state and agriculture development is impeded by the biophysical limitations of the area. Thus, the State is confronted with a situation in which not only soil has to be conserved but a suitable infrastructure that will enable people to produce sufficient food grains for their sustenance is required.

One of the surest way of achieving soil and water conservation and improvement in the socio-economic condition of the people is to accept land development as an infrastructure for permanent cultivation of crops. Therefore, large scale development of land, Water Harvesting Pond (WHP) and water management has been taken up as a State Earmarked Sector Scheme in order to create infrastructure for increasing crop production and to stabilize the degradation under Rural Infrastructure Development Fund (RIDF), Negotiated Loan from NABARD. The Department has taken up bench terraces development, land leveling with rain water harvesting pond and judicious water management for permanent cultivation of crops in 62 projects involving 110 villages. The list of projects under implementation are given in Annexure-II

An amount of ` **135.00 Lakhs** is anticipated to be spent during the year 2016-2017.

10. Soil Erosion Control at Lower Chandmari, Kohima:

This Landslide Control scheme is being taken up in Lower Chandmari, Kohima which is a human inhabited area. This area is badly affected by huge volume of landslide that occurred during monsoon season of the year 2010 causing heavy destruction of inhabitated land including road, footpath, animal shed, kitchen garden etc. It is observed that unless some preventive engineering measures are taken up, the problem is likely to get worse in near future. Therefore, the project is taken up to construct some protection engineering work under Negotiated Loan HUDCO 2016-17.

An amount of **`65.00 Lakhs** is anticipated to be spent for construction of 137 units of protection and conservation engineering structures such as Gully Plug dams, Loose Boulder Check Dams, Brushwood Check Dams, CRSM Retaining walls etc.

Shazou Nerhema Village– ILD

ILD beneficiaries at work

Shazou Nerhema Village– ILD

IV
NEC SCHEMES

11. Development of WHP for Augmentation of Irrigation in Nagaland:

With exacerbated impacts of climate change, managing water resources and infrastructure is becoming an uphill task for the State. Villagers across the State have stated that the water sources and the perennial springs and streams are drying up. The project is to replicate the Kikruma technology of Rain Water Harvesting popularly known as *Zabo,* to other villages, especially in the locations where high altitude Terrace Rice Cultivation is taking place to provide assured irrigation water facility and cultivation of vegetable crops during rabi season. It is being implemented in Phek and Kohima districts where high altitude Terrace Rice Cultivation is practiced traditionally.

An amount of ` **111.11 Lakhs** is anticipated to be spent under the scheme during 2016-17 for construction of 149 nos of WHP, 149 nos of Silt Retention Tank and irrigation/ feeder channels.

12. Watershed Management for Sustainable Agriculture Production & Improved Livelihood:

The development of land and water resources cannot be considered independent of each other for sustainable natural resources management. Conservation and management of rainwater holds the key for sustainable agriculture. In a watershed, there are interactions between resource users, the resources themselves, and the institutions that govern their access, use and management. It is, therefore, impossible to envisage or implement sustainable solutions for development of land and water resources and their management without active and full participation of local community. Development of land and water together with sustainable production systems when confined to a small natural drainage unit such as watershed leads to sustainable development. Watershed management has, therefore, emerged as a new paradigm for planning, development and management of land, water and biomass resources with a focus on social and institutional aspects apart from bio-physical aspects following a participatory "bottom-up" approach. Considering the above facts, the Department of Soil and water conservation has prepared DPR on Watershed management for sustainable agriculture production and improved livelihood with an objective to provide holistic land treatment programme to ensure alternative, multi disciplinary, subsidiary, eco friendly and adaptable innovative technology to for sustainable agriculture production and improved livelihood. It also envisage attenuating jhum practices and prevent the environment from further degradation, create rural employment opportunities and awareness in the contiguous

An amount of ` **111.11 Lakhs** is spent for development of 44 ha under Bench Terracing and Contour Trenching, 12 nos WHP, 106 ha horticulture plantation and 149 ha under afforestation.

13. Watershed Treatment for Flood Mitigation & Livelihood :

Natural resources degradation problems have been further aggravated due to constant population growth of both human and livestock. The increasing demand for food, fodder, fuel, fibre etc leads to indiscriminate exploitation of the natural resources such as land, water and vegetation thereby endangering food security and causing ecological and environmental problems in the State. Thus the Department, under the scheme, is taking up Soil and Water Conservation oriented activities such as Bench Terracing, Water Harvesting Structures, Spurs and low cost Check dams to facilitate sustainable agriculture production and to protect the environment. These measures are undertaken to reduce soil erosion, arrest runoff water to the extent possible and to conserve water for multiple purposes thereby increasing productivity and restoring the health of the environment.

An amount of ` **100.00 Lakhs** is anticipated to be spent under the scheme for development of 215 ha. Contour trenching, 112 nos check dams, 15 nos WHP, 100 ha agro-forestry and 40 ha tea plantation.

Water: the Elixir of Life – Conserve

WHP under NEC

WHP under NEC

V
CENTRALLY SPONSORED SCHEMES

14. Integrated Catchment Area Treatment (Flood Management Programme):

The department of Soil & Water conservation has prepared 12 projects on Integrated Catchment Area Treatment Plan and submitted to the Ministry of Water Resources, River Development and Ganga Rejuvenation for the Flood Management Programme under AIBP for which 3 prioritized namely Upper Sidzu in Kohima and Phek Districts, Nanga-Mela Ghoki in Zunheboto district and Dzuma sub-watersheds in Dimapur district got sanctioned during 2016-17.

The programme is taken up not only as flood control measures/ scheme but also to restore back the fragile ecology of the watersheds and stabilizing the catchments of Hydro Electric, water supply, irrigation, agriculture projects including roads and landslides in various pockets.

An amount of ` 1255.36 Lakhs was released by MOWR as first installment, that is, 90% Central Share and the State has already allocated ` 139.48 as its 10% share during 2016-17 for construction of 894 contour trenching, 93 WHP and 1362.62 conservation structures.

15. Rashtriya Krishi Vikas Yojana (RKVY) Scheme (CSS) :

The Department of Soil & water Conservation is taking up Soil & Water Conservation oriented activities under RKVY such as Bench Terraces and Water Harvesting Ponds to facilitate sustainable agriculture production and to protect environment. These measures are undertaken to reduce soil erosion, arrest surface runoff water to the extent possible and to conserve water for multiple purposes thereby increasing crop productivity and restoring the health of the environment.

An amount of ` **310.00 Lakhs** is anticipated to be spent under the scheme for development of 500 Ha. of bench terraces and 230 units of Water Harvesting Ponds (WHP).

Going from Organic
by Default to
Organic in Reality

WHP under RKVY

Bench Terracing under RKVY

capacity building at Sakhabama

Bamboo based check dam in Zutovi Village

Farm Pond at Sokomi Village

Gabion Structure at Ruzaphema village

Sand filled bags Check Dams at Hovukhu Village

WHP under construction at zutovi village

VI
ANNEXURES

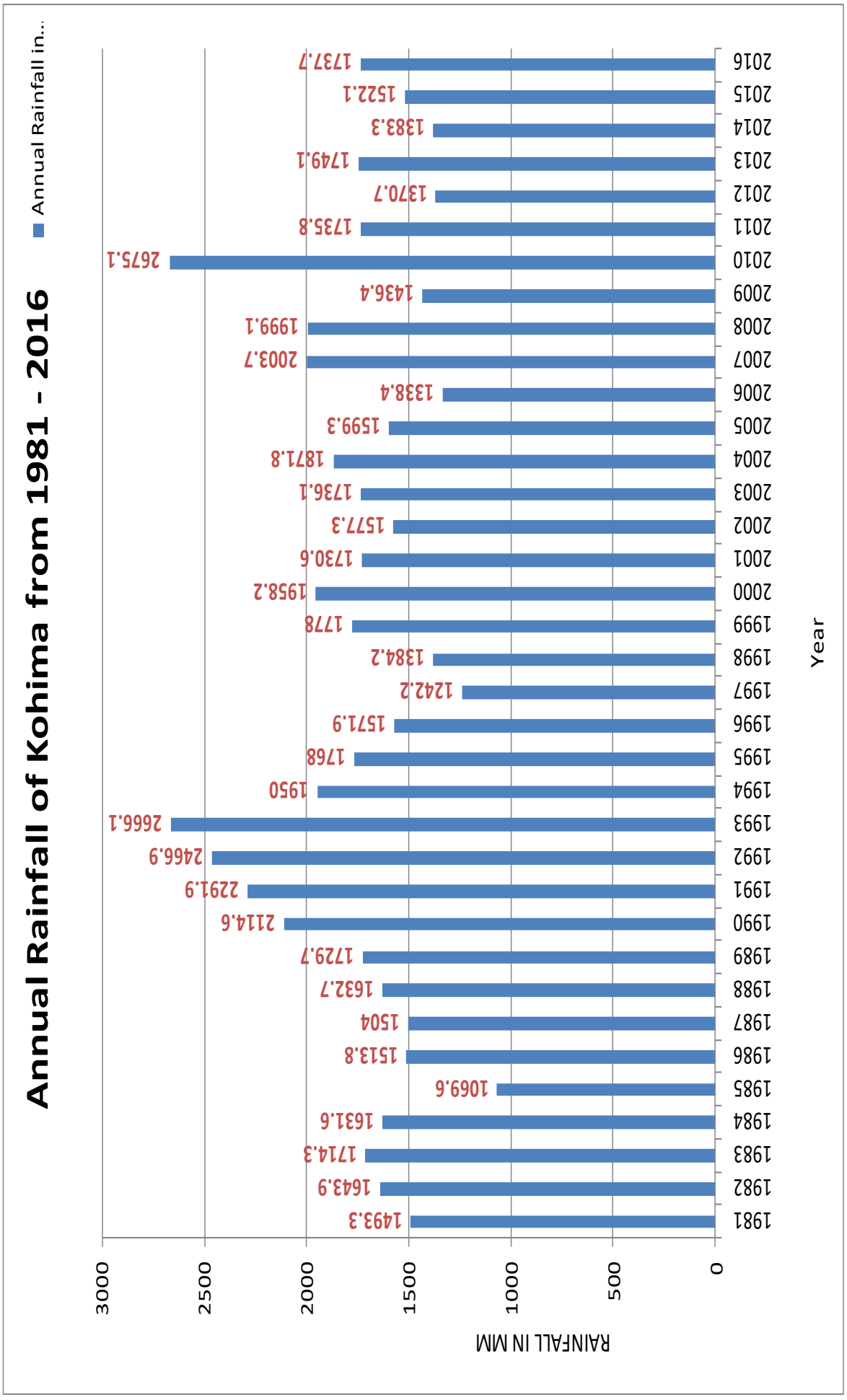
Annexure-I- List of Projects under IWMP During the 12th Plan Period (2012-17)

Sl. no	Project name	Name of village	Name of the RD Block	District
1	2	3	4	5
1	Rudiru	Kigwema	Jakhama	Kohima
2	Besenru	Khonibizu	Tsuemenyu	-do-
3	Lang	Pangsa	Noklak	Tuensang
4	Moyi Yong	Yakor	Shamator	-do-
5	Kechipyoung	Kuthur	sangsangyu	-do-
6	Amonghan	Phuktong	Mon	Mon
7	Lunghan	Ngangching	Aboi	-do-
8	Tinyu	Tizit village	Tizit	-do-
9	Teyong	Sakshi	Sakshi	Longlen
10	Yianghka	Tamlu K Khel	Tamlu	-do-
11	Tereti	Longkhimong	Khonsa	Kiphere
12	Upper kutu	Tehipu	Phek	Phek
13	Mahaghida	Matikhru	Meluri	-do-
14	Satsare	Thetsumi (Chezami)	Chezami	-do-
15	Atukumla	Lochomi	Zunheboto	Zunheboto
16	Khenighiki	Kitami(Katashi)	Katashi	-do-
17	Pukhobo	Melahu	Tokyi	-do-
18	Kipereu	New Peren	Peren	Peren
19	Keloreu	Jalukieram	Jalukie	Peren
20	Tehukim	Neroyu	Wokha	Wokha
21	Tehukum	Okheyan	Wokha	-do-
22	Akhakighoki	Henito	Nuiland	Dimapur
23	Zulu Lu	Aoyim	Kohuboto	-d0-
24	Chumong	Chungtia	Ongpangkong South	Mokokchung
25	Yongpang	Yaongyimti old	Chuchuyimlang	-do-
26	Mangmetongba	Nokpu	Longchem	-d0-
27	Longjang Lemang	Chuchuyimlang	Chuchuyimlang	-do-
28	Orangpang Lu	Yaongimsen	Changtongya	-do-
29	Achitongpang	Unger	Changtongya	-do-
30	Zungyi Lu	Kupza	Mokokchung(S)	-do-
31	Yajanglenden	Yajang	Longchem	-do-
32.	Kumbalu	Khar	Mongkolemba	-do-

Annexure-II: List of Projects involved, Potential areas for Development under Integrated Land Development Project (ILDP) in Nagaland during 2016- 2017 to 2018 - 2019

Sl. No	Name of Project	Name of Villages involved	Name of District
1.	Dzüdza-Sanuo	Kohima village	Kohima
2.	Lower -Dzü	Kijumetouma Touphema,Dihoma	-do-
3.	Upper –Dzü Valley	Kidima ,Sakhabama Kezoma ,Kezo Basa	-do-
4.	Dzüdza West Bank	Mengujuma, Thekrejuma Mezo-Basa Jotsoma,Zubza	-do-
5.	ZukumNra Valley	Sendenyu , Phenshunyu	-do-
6.	Khakheli-Tsonso-Ghozhu	Kandinyu,Tesopenyu,Tronso, Nsunyu	-do-
7.	Thor-rü	Nerhema Model, Nerhema , Nerhi Pheza	-do-
8.	Ayonglanglu	Chuchuyimlang, Yaongyimsen	**Mokokchung**
9.	LowerTsurang Valley	Longjemdang, Changdang, New Longjemdang	-do-
10.	KupokSura-Mentsu	Ungma,Mangmetong	-do-
11.	Sachanemen	Aliba, Chungtia	**Mokokchung**
12.	PosingLingka	Tsurmen, Akhomen Aonokpuyimsen	-do-
13.	ArAtokLempak	Merangkong Kangtsungyimsen	-do-
14.	Upper Tsurang Valley	Medemyim,Chungtia Yimsen, Watiyim	-do-
15.	Ming-chu	Khar	-do-
16.	Tsurong mang	Waromung, Debuia Monchen, Mangkolemba	-do-
17.	Satsuphen	Longsa	**Wokha**
18.	SolungthaNiyipchu	Wokha Village	-do-
19.	Tssorronchu	Bagthy, Lakhuti	-do-
20.	Rampangthachu	Yimpang, Alikhum Liphi	-do-
21.	Hayimong	New Longidang	-do
22.	Longpa Valley	Akahika Khaktato, Amboto	-do-
23.	Kholazu-koto	Lizutomi,Stami, Kukhishe	**Zunheboto**
24.	Tsuthaqa-Mukoti	Khekiye, Rotomi	-do-
25.	Muzamuza	Lutshumi	-do-

Sl. No	Name of Project	Name of Villages involved	Name of District
26.	Tizuqa	Kivikhu	**Zunheboto**
27.	Kheniki	Kitami	-do-
28.	Deinyu	Tuensang Village	***Tuensang***
29.	Kiding	Lirise	*-do-*
30.	Jet	Noklak Village	*-do-*
31.	Alothsuh-Yea	Leangkongru, Sekiur	*-do-*
32.	Thoktsur-Kelong	Thoktsur, Sanglao	*-do-*
33.	Upper Zingki	Pang	*-do-*
34.	Mayimong	Choklangan	*-do-*
35.	Shimloyalao	Mon Village,Totok chingkhu	***Mon***
36.	LhejanPesham	Ukha	*-do-*
37.	Shonglong-sakha	Changlang, Chenlosho	*-do-*
38.	Chomtang-Tizit	Tizit Village, Lapa	*-do-*
39.	Suthida	Losami	**Phek**
40.	Luzazu	Chesezu	-do-
41.	Chokhulesha	Lephori	-do-
42.	Zale-phrü	Chozuba,Yoruba	-do-
43.	Lucho	Meluri	-do-
44.	Taku	Kütsapo	-do-
45.	Nihoi	Nihoi	**Dimapur**
46.	Vihuto	Vihuto	-do-
47.	Nizhevi	Nizhevi Village	**Dimapur**
48.	Chathe Valley	Medziphema, Pherima, seithekima C	-do-
49.	Lower Chathe Valley	Showba(O&N), Kihekhu	-do-
50.	Tainiaseu	Ngwalwa, Peren(N)	***Peren***
51.	Nguiki	Ngam	*-do-*
52.	Ngonzam	Nzau, Ikiesinggram	*-do-*
53.	Upper Chathe	Poilwa, Hiningkowla,	*-do-*
54.	Sumthoya	New Risethsi	***Kiphire***
55.	Phuluti	Cedeyevong	*-do-*
56.	Zaong	Zaonger	*-do-*
57.	Youngha kilo	Old Monger,Yingpgire	*-do-*
58.	Makshushinga-hom	Kangching, Tamlu	***Longleng***
59.	Monyu	Yimchong	*-do-*
60.	Meipham-odang	Yongya, Orangkong	*-do-*
61.	Lakki Valley	Bora Namsang	*-do-*
62.	Yongyakh	Yongpang	*-do-*



Rain water: A blessing if properly harnessed or become a curse if allowed to flow freely