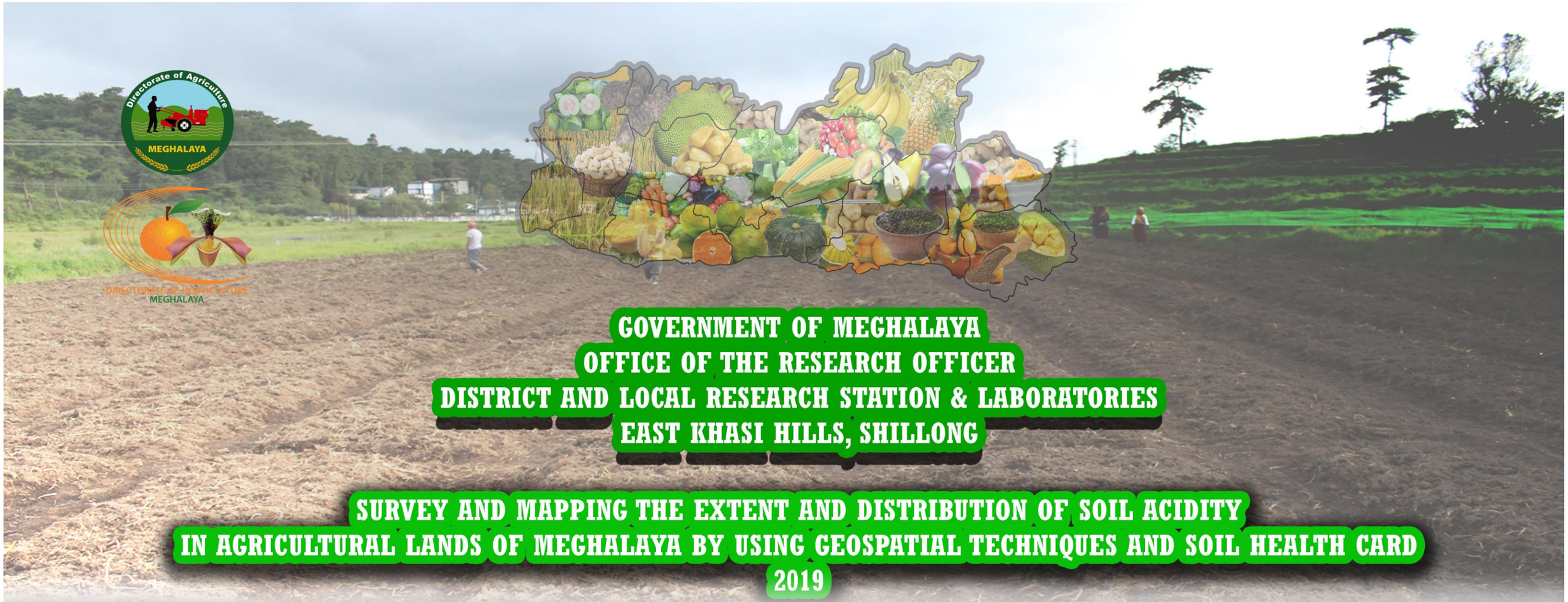


GOVERNMENT OF MEGHALAYA
OFFICE OF THE RESEARCH OFFICER
DISTRICT AND LOCAL RESEARCH STATION & LABORATORIES
EAST KHASI HILLS, SHILLONG

SURVEY AND MAPPING THE EXTENT AND DISTRIBUTION OF SOIL ACIDITY IN AGRICULTURAL LANDS OF MEGHALAYA BY USING GEOSPATIAL TECHNIQUES AND SOIL HEALTH CARD

2019

District and Local Research Station & Laboratories, Risa Colony, East Khasi Hills District, Meghalaya – 793003; email: agriroshg@gmail.com

Smt. L. Kharkrang
Director of Agriculture (R&T)

Foreword

Soil acidity is one of the inherent properties in agriculture lands of the State which influence plant health and vigour, affecting the yield and productivity of crops. Understanding the degree of soil acidity, knowing the extent and its distribution in the State will provide a concrete base and valuable information for detailed planning of crop production activity in the future.

I am glad that this project to survey, to classify and map the acidity affected soils in the State by utilizing the Soil Health Card information with the application of Geospatial Techniques is completed. I wish to congratulate the Office of The Research Officer, District and Local Research Station & Laboratories Shillong, Directorate of Research, Training and Technology Induction for this endeavour. I hope that this report is useful in managing agriculture development programme.

Smt. L. Kharkrang.

Shri. K. B. Lakiang
Research Officer, DLRS&L
East Khasi Hills, Shillong.

Acknowledgement

The office of the Research Officer, East Khasi Hills would like to express gratitude to the Directorate of Agriculture, for the support and trust extended to the office to carry out this project. This project was an important effort by the officers and staffs of the District and Local Research Station & Laboratories, Shillong, and it gives us immense satisfaction to be able to undertake and complete this work. I also wish to offer Thankfulness and Commendations to the offices of the DAOs and DHOs of all districts and the offices of Research Officer Tura and Jowai, for the huge efforts, and to NIC Shillong, and NESAC Umiam for the support towards completion of Soil Health Card programme in Meghalaya which forms the major source of data utilized in the project study. I am sure that the experience from this task would motivate everyone to strive for the development of agriculture production and the betterment of the farming community in the State.

Shri. K. B. Lakiang

SURVEY AND MAPPING THE EXTENT AND DISTRIBUTION OF SOIL ACIDITY IN AGRICULTURAL LANDS OF MEGHALAYA BY USING GEOSPATIAL TECHNIQUES AND SOIL HEALTH CARD 2019

TABLE OF CONTENTS

	Pg. No.
I. INTRODUCTION	**01**
a. Soil acidity	
b. Soil Testing and Soil Health Card	
c. Application of Geospatial Technologies in Management of Agriculture Resources	
II. AIMS & OBJECTIVES OF THE PROJECT	**02**
III. MATERIALS & METHODS	**02 - 03**
IV. RESULTS AND DICUSSIONS	**04 – 06**
a. Soil Testing and Survey of Soil Health, Soil Fertility and Soil Quality	
b. Planning and Guidelines for Cropping Management in Acid Soils	
V. SUMMARY	**06 – 07**
VI. REFERENCES	**60**

LIST OF FIGURES/ TABLES

Figures/ Tables	page no
1. Fig. Flow chart of Methodology	03
2. Table: (i) Extent and Distribution of Soil Acidity Classes in Different Blocks of Meghalaya	04
3. Table (ii) Extent and Distribution of Soil Acidity Classes in various districts of Meghalaya.	05
4. Table: (iii) Extent of Soil Acidity Classes in Meghalaya	05
5. Fig. Distribution of soil sampling grids location	08
6. Fig. Soil pH Map in Agriculture Land of Meghalaya	09
7. Fig. Extent of soil acidity in East Khasi district	10
8. Fig. Extent of soil acidity in West Khasi Hills district	11
9. Fig. Extent of soil acidity in Ri- Bhoi district	12
10. Fig. Extent of soil acidity in South West Khasi Hills district	13
11. Fig. Extent of soil acidity in West Jaintia Hills district	14
12. Fig. Extent of soil acidity in East Jaintia Hills district	15
13. Fig. Extent of soil acidity in West Garo Hills district	16
14. Fig. Extent of soil acidity in East Garo Hills district	17
15. Fig. Extent of soil acidity in South Garo Hills district	18
16. Fig. Extent of soil acidity in South West Garo Hills district	19
17. Fig. Extent of soil acidity in North Garo Hills district	20
18. Fig. Extent of soil acidity in Mylliem Block	21
19. Fig. Extent of soil acidity in Mawphlang Block	22
20. Fig. Extent of soil acidity in Mawrynkneng Block	23
21. Fig. Extent of soil acidity in Mawkynrew Block	24
22. Fig. Extent of soil acidity in Mawsynram Block	25
23. Fig. Extent of soil acidity in Laitkroh- Khatarshnong Block	26
24. Fig. Extent of soil acidity in Shella Bholaganj Block	27
25. Fig. Extent of soil acidity in Pynursla Block	28
26. Fig. Extent of soil acidity in Nongstoin Block	29
27. Fig. Extent of soil acidity in Mawshynrut Block	30
28. Fig. Extent of soil acidity in Mawthadraishan Block	31
29. Fig. Extent of soil acidity in Mairang Block	32
30. Fig. Extent of soil acidity in Umsning Block	33
31. Fig. Extent of soil acidity in Umling Block	34
32. Fig. Extent of soil acidity in Jirang Block	35
33. Fig. Extent of sol acidity in Mawkyrwat Block	36
34. Fig. Extent of soil acidity in Ranikor Block	37
35. Fig. Extent of soil acidity in Thadlaskein Block	38
36. Fig. Extent of soil acidity in Laskein Block	39
37. Fig. Extent of soil acidity in Amlarem Block	40
38. Fig. Extent of soil acidity in Khliehriat	41
39. Fig. Extent of soil acidity in Saipung Block	42
40. Fig. Extent of soil acidity in Rongram Block	43
41. Fig. Extent of soil acidity in Gambegre Block	44
42. Fig. Extent of soil acidity in Dagenggre Block	45
43. Fig. Extent of soil acidity in Selsella Block	46
44. Fig. Extent of soil acidity in Tikrikilla Block	47
45. Fig. Extent of soil acidity in Dalu Block	48
46. Fig Extent of soil acidity in Songsak Block	49
47. Fig. Extent of soil acidity in Samanda Block	50
48. Fig. Extent of soil acidity in Rongjeng Block	51
49. Fig. Extent of soil acidity in Baghmara Block	52
50. Fig. Extent of soil acidity in Chokpot Block	53
51. Fig. Extent of soil acidity in Rongara Block	54
52. Fig. Extent of soil acidity in Gasuapara Block	55
53. Fig. Extent of soil acidity in Betasing Block	56
54. Fig. Extent of soil acidity in Zikzak Block	57
55. Fig. Extent of soil acidity in Resubelpara Block	58
56. Fig. Extent of soil acidity in Kharkutta Block	59

SURVEY AND MAPPING THE EXTENT AND DISTRIBUTION OF SOIL ACIDITY IN AGRICULTURAL LANDS OF MEGHALAYA BY USING GEOSPATIAL TECHNIQUES AND SOIL HEALTH CARD 2019

I. INTRODUCTION

a. Soil Acidity:

One of the most important properties of the soil that has a major effect on plant health and vigour is the soil chemical reaction. Soil reaction is the degree of soil acidity or alkalinity which is measured by pH level of the soils. Most plant species thrives well when the soil reactions ranges around the neutral region with pH level of 6.5 to 7.5. However when the pH measurement falls below 6.0 or rise above 7.5, the acidity or alkalinity reactions in the soil interferes with nutrient availability and absorption by plant roots.

Strong acidic reaction in the soil creates problem to nutrient absorption by plant roots due to factors like phosphate fixation, decrease in availability of macro nutrients such as nitrogen, calcium, magnesium and micro nutrients like Zn etc., on one hand; and in the other hand, extreme soil acidity causes high solubility and concentrations of Iron and Aluminum, resulting in toxicity and adverse effect on the crop and its yield, when the uptake in excess amount of these nutrients by the plants leads to physiological disorder.

Further, extreme acidity in the soil environment may also have an effect on the activity and diversity of soil micro flora & fauna and this in turn will have a direct influence on the soil health and fertility status. These soil microbial populations plays crucial role in decomposition and transformation of plant nutrients that are locked in various organic and mineral complexes and converting them into plant absorbable forms of anions and cations, and many studies indicated that their populations are affected by soil pH.

Soils of Meghalaya have predominantly acidic reactions with pH ranges of 4.0 to 6.5. Numerous Scientific works and studies in the past have attributed various contributing factors to soil acidity, such as the acid soil forming parent materials related to the geology of the area, high rainfall intensity leading to leaching of basic cations, high Fe and Al ion activities in the soils etc.

b. Soil Testing and Soil Health Card:

In order to develop strategies for management of soil health and soil acidity in particular, it is necessary therefore to know the extent or scale of the problem in the State and to locate the site of occurrence of these soils, which can be done through the process of survey and soil testing. There is commendable achievement by the State Department of Agriculture through its Comprehensive Soil Testing and Soil Health Card Scheme which was implemented since 2015.

During the Soil Health Card Programme the soil samples were collected along with specific coordinates and tested for various parameters like pH, N, P, K, Micronutrients etc. Besides the issuing of Soil Health Cards & Recommendations to the farmers, this programme has also generated a huge amount of digital data which are useful for understanding the health status of our agricultural lands, and the making of management plans.

c. Application of Geo-spatial Technologies in Management of Agriculture Resources:

Remote Sensing and Geographic Information System (RS&GIS) are modern techniques by which we can take advantage of the development in space technology to gain comprehensive knowledge and understanding about our nature and particularly the agriculture resources. Through the use of Geospatial techniques like RS & GIS, the RS image or data and field information can be integrate and analyzed in GIS

platforms to create simple interpretation of our natural environment in the form of maps. These various theme maps can form concrete basis and become useful tools for the agriculture development planners and extension workers in the field.

Existing RS & GIS works and experience by the State along with strong co – operation and support from North Eastern Space Application Centre (NESAC), Umiam, has lead to creation of very important scientific data about the natural agriculture resources in the state. The recent works on identification and mapping of rice areas in the State, under the Rice Mission Scheme which was completed through the collaborative works of the Department of Agriculture, Meghalaya with NESAC, is an important step towards Furthering of this technology. The information and experience from these passed projects besides the soil health card, etc., are the basic components to enrich the scientific knowledge and formulation of development plans in the future.

II. AIMS & OBJECTIVES OF THE PROJECT:

This project to survey, classify and mapped the extent of soil acidity in Meghalaya has been undertaken by The O/o The Research Officer, District and Local Research Station & Laboratories, East Khasi Hills, Shillong and funded from the Acid Soil Reclamation Scheme of RKVY (2016-17) under the Soil Survey Component.

The following objectives were formulated for this project:

i. *To describe the trends in the distribution and extent of soil acidity for the whole state of Meghalaya*

ii. *To Survey, Classify and Mapped the extent of Soil Acidity in the whole state of Meghalaya by using Geospatial techniques and Soil Health Card data*

iii. *Classification of Agricultural Soils according to pH value classes and to create District & Block level Soil Acidity Maps.*

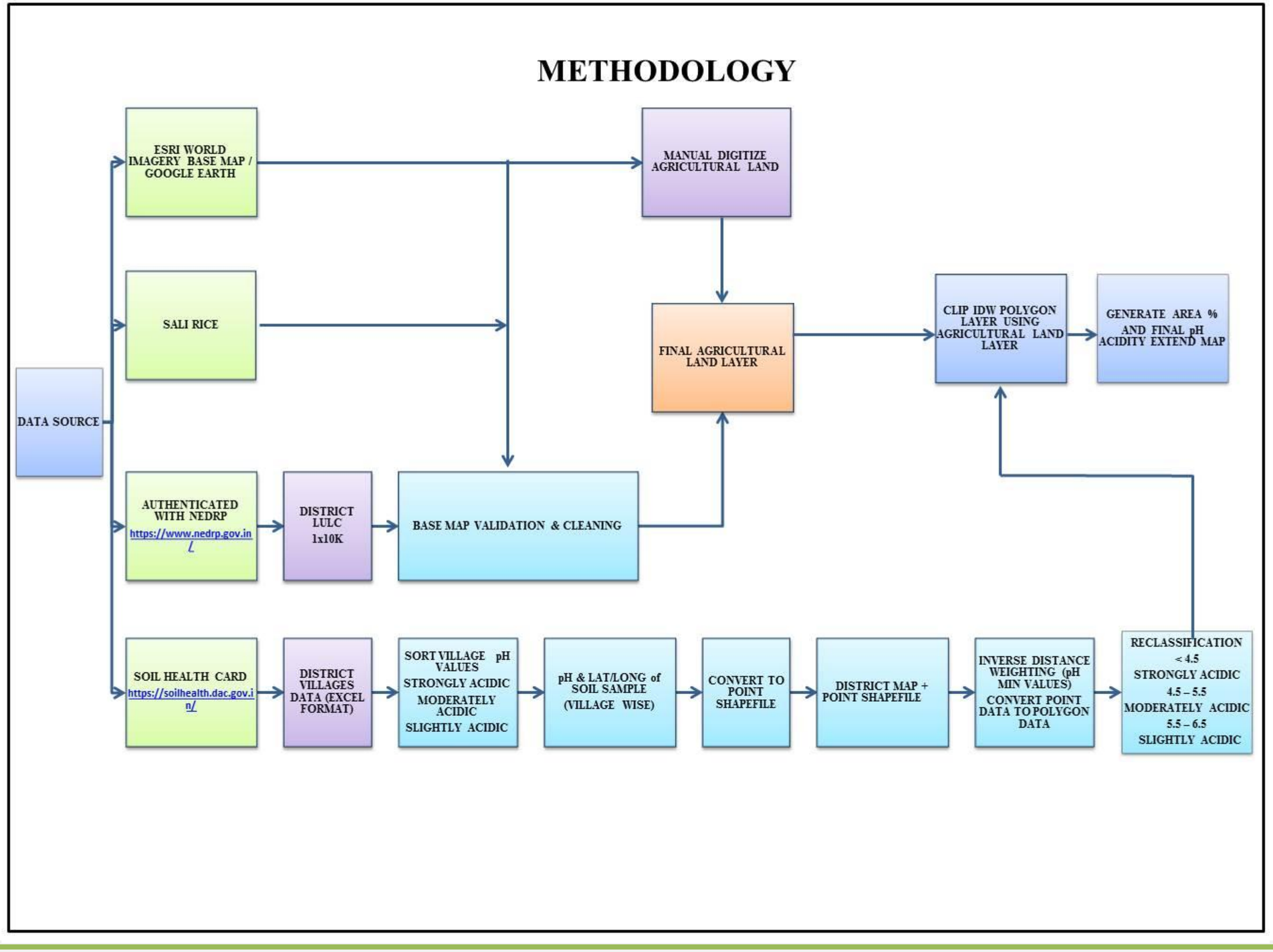
III. MATERIALS & METHODS:

The Agriculture Land Use have been compiled by integrating data of Rice mission areas, Soil Health Card data 2017-2019, validation and cleaning, on screen analysis in comparison with World Imaginary Base Map, Open Source Data like Google Maps, manual digitizing and ground verification where ever possible and then the final Agriculture Lands Uses are generated.

The soil pH value is obtained from soil test results conducted by State Soil Testing Laboratories (STLs) of the Department of Agriculture Meghalaya. The pH of the soils were tested as per standard procedure (soil sample is shake in d.w. at 1 : 2.5 ratio), and measured with pH meter. The soil testing results data also contain information such as Block, Village name with point location or latitude and longitude of soil sampling grids which were uploaded by the STLs into the Soil Health Card portal, Government of India (https://soilhealth.dac.gov.in/) for the generation of Unified Soil Health Card and distribution to farmers.

The data is downloaded from the portal and edited in Microsoft excel, converted to compatible format and transferred to GIS environment by using Arc GIS 10.3 software. The point layer with grid number, village name and pH value is created, and then the pH values are classified into three classes viz., Strongly acidic (pH = < 4.5), Moderately acidic (pH = 4.5 – 5.5) and Slightly acidic (pH = 5.5 – 6.5) as per Department of Agriculture, Government of India guidelines for generation of soil fertility maps. Finally the map of the extent of soil acidity is generated by using Spatial Analyst tools of Arc Toolbox, Inverse Distance Weighted (IDW) Interpolation Technique. Flow chart showing details of the methodology is illustrated in Fig 1.

Fig. 1: **FLOW CHART: METHODOLOGY IN THE CLASSIFICATION AND MAPPING THE EXTENT OF SOIL ACIDITY IN AGRICULTURE LANDS OF MEGHALAYA 2019**



IV. RESULTS AND DICUSSIONS:

The results of identification, classification and mapping of the extent of soil acidity in Meghalaya are presented in tables (i), (ii) & (iii)

Table: (i) Extent and Distribution of Soil Acidity Classes in Different Blocks of Meghalaya

Districts	Blocks	Area and Distribution of pH ranges in Agricultural Soils			Agricultural Land in Hectares
		Strongly Acidic (<4.5)	Moderately Acidic (4.5 - 5.5)	Slightly Acidic (5.5 - 6.5)	
East Khasi Hills	Mylliem	38.73 *(0.90)*	4130.93 *(95.68)*	147.64 *(3.42)*	4317.30
	Shella	45.99 *(3.10)*	732.80 *(49.46)*	702.77 *(47.43)*	1481.56
	Pynursla	197.04 *(7.61)*	1595.28 *(61.60)*	797.38 *(30.79)*	2589.70
	Mawsynram	231.38 *(5.42)*	2519.80 *(59.04)*	1516.19 *(35.53)*	4267.37
	Mawryngkneng	1318.11 *(21.30)*	4633.82 *(74.89)*	235.92 *(3.81)*	6187.85
	Mawphlang	94.25 *(1.04)*	8749.65 *(96.51)*	221.92 *(2.45)*	9065.82
	Mawkynrew	687.43 *(9.94)*	5574.46 *(80.64)*	651.03 *(9.42)*	6912.92
	Khatarshnong-Laitkroh	365.88 *(8.27)*	3750.64 *(84.81)*	306.09 *(6.92)*	4422.61
West Khasi Hills	Mairang	0.00	4591.51 *(68.86)*	2075.72 *(31.13)*	6667.23
	Mawshynrut	0.00	5983.35 *(85.81)*	989.09 *(14.18)*	6972.44
	Mawthadrashan	3.33 (0.06)	1956.33 *(33.86)*	3817.96 (66.08)	5777.62
	Nongstoin	6.99 (0.15)	3824.33 *(83.24)*	763.23 *(16.61)*	4594.55
Ri - Bhoi	Umsning	127.12 *(1.23)*	8753.60 *(84.77)*	1445.98 *(14.00)*	10326.70
	Umling	6.32 *(0.09)*	5982.14 *(91.69)*	535.99 *(8.22)*	6608.76
	Jirang	0.00	4049.84 *(94.63)*	229.91 *(5.37)*	4279.75
South West Khasi Hills	Ranikor	22.52 *(0.52)*	3347.26 *(77.76)*	934.92 *(21.72)*	4304.70
	Mawkyrwat	54.39 *(0.59)*	7921.87 *(86.33)*	1199.77 *(13.08)*	9176.03
West Jaintia Hills	Amlarem	231.59 *(4.00)*	5257.35 *(96.00)*	0.00	5488.94
	Thadlaskien	139.61 *(0.82)*	16715.80 *(98.81)*	61.82 *(0.36)*	16917.23
	Laskien	99.09 *(1.53)*	6310.18*(97.48)*	63.89 *(0.97)*	6473.16

Districts	Blocks	Area and Distribution of pH ranges in Agricultural Soils			Agricultural Land in Hectares
		Strongly Acidic (<4.5)	Moderately Acidic (4.5 - 5.5)	Slightly Acidic (5.5 - 6.5)	
East Jaintia Hills	Saipung	381.10 *(8.72)*	3982.79 *(91.16)*	5.33 *(0.12)*	4369.22
	Khliehriat	304.80 *(8.15)*	3435.52 *(91.85)*	0.00	3740.32
West Garo Hills	Dadenggre	-	-	15825.56 *(100.00)*	15825.56
	Dalu	-	-	7488.44 *(100.00)*	7488.44
	Gambegre	-	-	3994.13 *(100.00)*	3994.13
	Rongram	-	-	7279.36 *(100.00)*	7279.36
	Selsella	-	-	22290.51 *(100.00)*	22290.51
	Tikrikilla	-	-	13772.35 *(100.00)*	13772.35
East Garo Hills	Rongjeng	-	-	8374.95 *(100.000*	8374.95
	Samanda	-	-	5379.00 *(100.00)*	5379.00
	Songsak	-	-	6202.79 *(100.00)*	6202.79
South Garo Hills	Rongara	-	-	3983.77 *(100.00)*	3983.77
	Gasuapara	-	703.53 *(9.26)*	6890.82 *(90.74)*	7594.35
	Chokpot	-	-	8017.22 *(100.00)*	8017.22
	Baghmara	-	549.70 *(9.02)*	5541.52 *(90.98)*	6091.22
South West Garo Hills	ZikZak	-	-	13557.22 *(100.00)*	13557.22
	Betasing	-	-	14625.18 *(100.00)*	14625.18
North Garo Hills	Kharkutta	-	-	14625.18 *(100.00)*	14625.18
	Resubelpara	-	-	2824.94 *(100.00)*	2824.94
	Total				291591.83

Table (ii) Extent and Distribution of Soil Acidity Classes in Various Districts of Meghalaya.

DISTRICT	Distribution of Soil pH in Cultivated Lands						Total Cultivated Area (Ha.)
	Strongly Acidic (<4.5)		Moderately Acidic (4.5 - 5.5)		Slightly Acidic (5.5 - 6.5)		
	Ha.	%	Ha.	%	Ha.	%	Ha.
East Khasi Hills	2978.81	7.59	31687.38	80.74	4578.93	11.17	39245.12
West Khasi Hills	10.32	0.04	16355.52	68.12	7646.00	31.84	24011.84
Ri – Bhoi District	133.44	0.63	18785.58	89.90	2211.88	10.47	21130.90
South West Khasi Hills	76.91	0.57	11269.13	83.59	2134.69	15.84	13480.73
West Garo Hills	-	-	-	-	70650.35	100.00	70650.35
East Garo Hills	-	-	-	-	19956.74	100.00	19956.74
South Garo Hills	-	-	1253.23	4.88	24433.33	95.12	25686.56
South West Garo Hills	-	-	-	-	28182.40	100.00	28182.40
North Garo Hills	-	-	-	-	12258.32	100.00	12258.32
West Jaintia Hills	470.29	1.64	28283.33	97.94	125.71	4.35	28879.33
East Jaintia Hills	685.90	8.46	7418.31	91.48	5.33	0.06	8109.54
	Total Cultivated Area						291591.83

Table: (iii) Extent of Soil Acidity Classes in Meghalaya.

Distribution of Soil pH in Cultivated Lands						Total Cultivated Area
Strongly Acidic (< 4.5)		Moderately Acidic (4.5 -5 .5)		Slightly Acidic (5.5 - 6.5)		
Ha.	%	Ha.	%	Ha.	%	Ha.
4355.67	1.49	115052.48	39.46	172183.68	59.05	291591.83

The Soil Acidity Classes are as per Soil Health Card Guidelines for Mapping of Soil Acidity in the Country, 2019-20.

The results and analysis of the Survey and Mapping the extent of soil acidity in the agriculture lands of Meghalaya as indicated in the soil acidity classifications of different districts and block maps can be explained as follow:

i. The entire cultivated area of the state generally have pH value less than 7.0
ii. Maximum areas under cultivated soils constituting 172193.68 hectares or 59.05 % fall under slightly acidic reaction with soil test pH value ranging between 5.5 to 6.5.
iii. About 115052.48 hectares or 39.46 % of the cultivated soils falls under Moderate Acidic soil reaction with pH value ranging from 4.5 to 5.5.
iv. Soils with pH value less than 4.5 constitute 4355.67 hectares or 1.49 % of the cultivated soils.
v. Almost all of the cultivated lands of the five districts of Garo hills have slightly acidic pH
vi. Maximum area of Soils in cultivated lands of Khasi and Jaintia Hills falls under moderate to strongly acidic class pH with values ranging from 4.5 to 5.5.
vii. Soils with strongly to extremely acidic pH are founds in pockets of East Khasi Hills, Ri – Bhoi, East Jaintia Hills & West Jaintia Hills districts. These soils are found in those areas where intensive agriculture activities occur in sloping lands, and those which are in proximity to coal mining areas in East Jaintia Hills.

V. SUMMARY:

This short project to Study, Classify, Survey and Map the Extent of Soil Acidity in Agricultural Lands of Meghalaya by Utilizing Geospatial Techniques and the Results of Soil Testing Programme has given us new insight about the Degree, Area and Spread of Soil Acidity in the State. Effects of Soil Acidity to Crop Production and the Possible Management Strategies are given in the following Summarisation.

a. Causes and Effects of Soil Acidity:

The study showed that arable lands of the entire state are affected by varying degrees of challenges to crop productivity due to soil acidity. The cause of soil acidity is due to the acidic parent materials from which the soils have been formed, coupled with humid climate and vegetation factors. There may be relationship between the practices of intensive cultivation in the sloping lands with the reduction in the pH values of these areas, which can be explained by the phenomenon of leaching of basic cations from the soils and the problem is acerbated in high rainfall intensity regions of Khasi and Jaintia Hills.

The developmental activities such as mining, quarrying and industrial in the vicinity of agriculture lands can leads to overspill and deposition of debris, or soluble Sulphates, Oxides of Iron & Aluminium etc., into agriculture lands in the lower lying areas, may be another reason of soil degradation in those areas with extremely low pH that require further investigation.

Many studies have reported that extreme soil acidity can interfere with the availability of plant nutrients in the soil viz., Phoshorus, Nitrogen, Potassium, Calcium, Magnessium, Zinc, Boron, etc., and in turn this may result in reduction on the ability of crops to reach the maximum potential in their vegetative growths and yield.

However slight to moderate soil acidity does not meant the immediate cause for cessation of crop production activity in those areas. There are many ways by which the problem can be alleviate or manage in order to prevent the loss of productivity, arresting further degradation of arable lands and also reclamation of degraded lands.

b. Soil Testing and Survey of Soil Health, Soil Fertility and Soil Quality:

i. The project indicated that Soil Testing and Soil Health Card helps to promote Adoption of Scientific basis of plant nutrient and soil fertility management with expectations of better soil health and crop vigour, sustainable increase in productivity, rational use of agricultural inputs and better margins in farming enterprises.

ii. Results of soil testing gives valuable information to changes and trends of soil fertility status and planning for crop production activity in the future.

iii. Soil Survey can give comprehensive information of Soil Quality, Inherent Capability that will be useful for Making Macro and Micro Agriculture Development Plans based on suitability of available Soil Resources.

c. Crop Production and Management of Acid Soils:

i. Crop Production in acid soils requires optimum soil fertility management, ensuring plant nutrient availability to crops in ample quantity as per soil test based recommendations of the Soil Health Card.

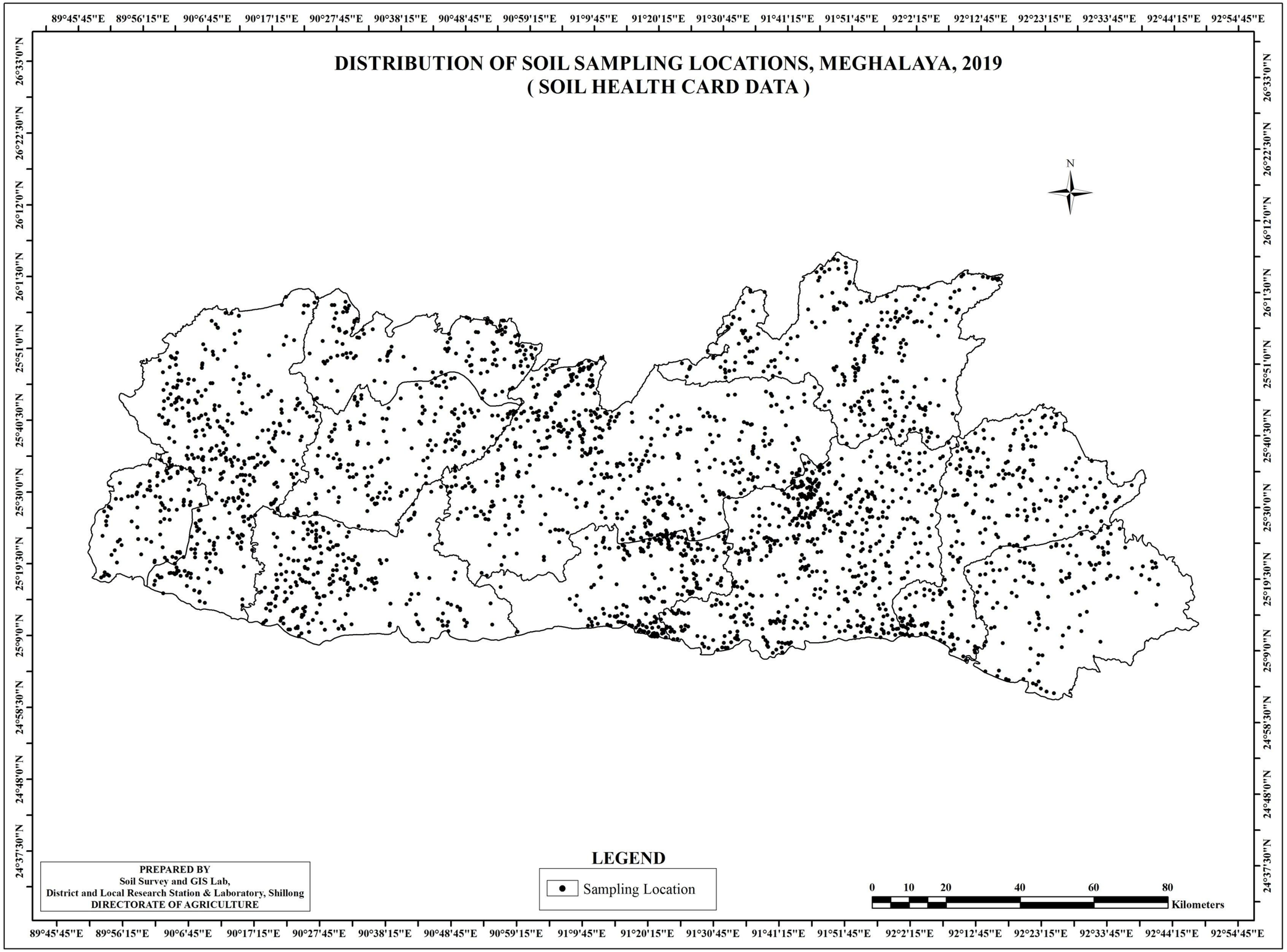
ii. Application of adequate amount of organic manure such as FYM, Pig Manure, Poultry Compost, Vermicompost, etc. Different kinds of organic composts can benefit the plants in terms of nutrient supply and in addition, the organic composts will help to increase the soil pH, boosting the soil microbial population and, the microbial secretion of beneficial enzymes can aid in better nutrient availability and plant growth. Besides these, the organic compounds have many beneficial effects on the plant and soil; they behaves as cementing agents that bind the soil particles, improve the structure and physical condition of the soil, ensuring better aeration, water holding capacity, thus increasing the crop vigour and conditioning the plant to resist or tolerate unfavorable environment.

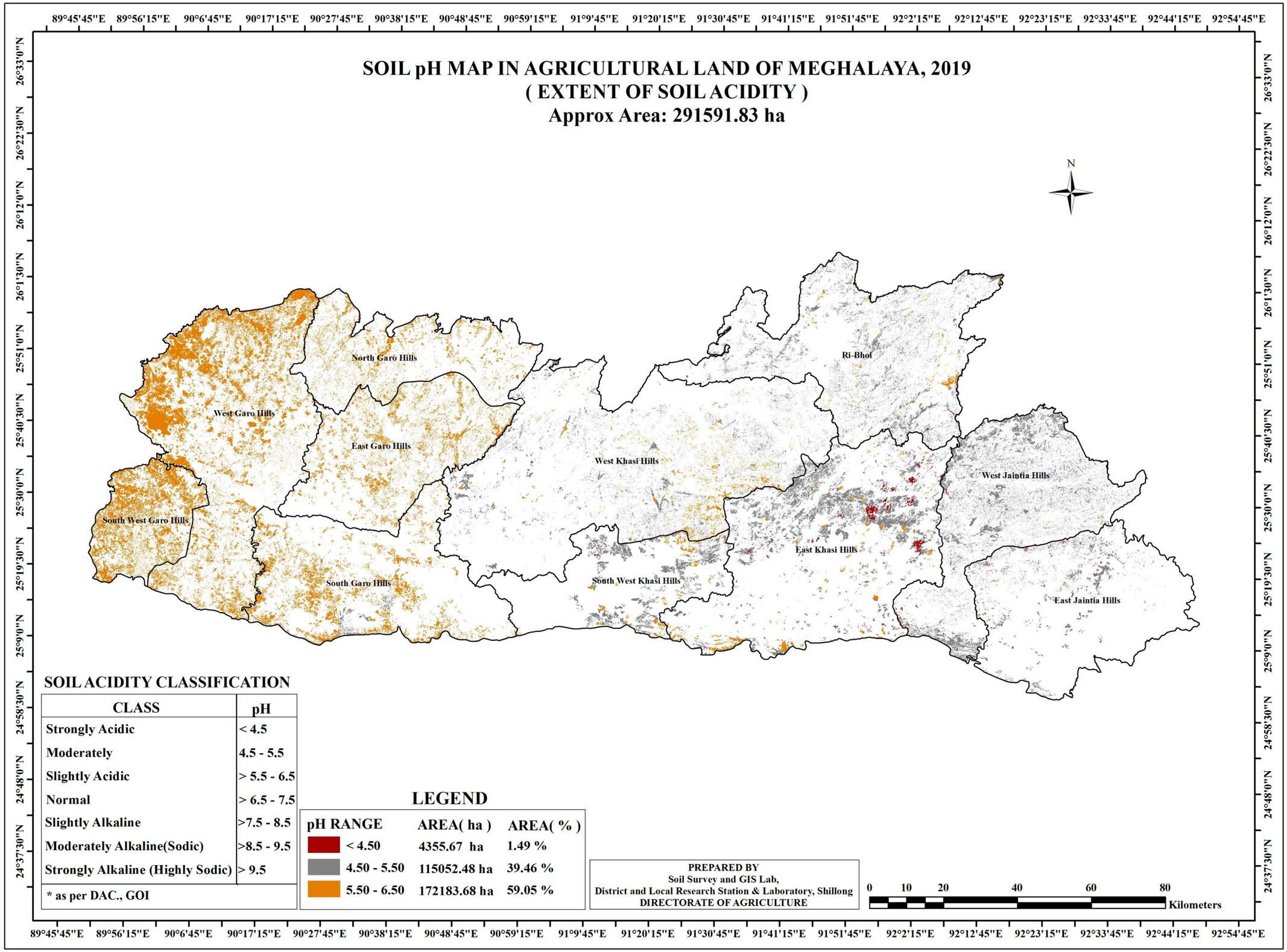
iii. In case of soils with slight to moderate acidity with pH above 5.5, there is no requirement of specific treatments to increase the soil pH. Application of liming materials such as dolomite, calcium carbonate before sowing of crop during land preparation @ 400 kg to 500 kg per hectare *(Annual Report 2012-13, ICAR NEH)* is sufficient to address the problem.

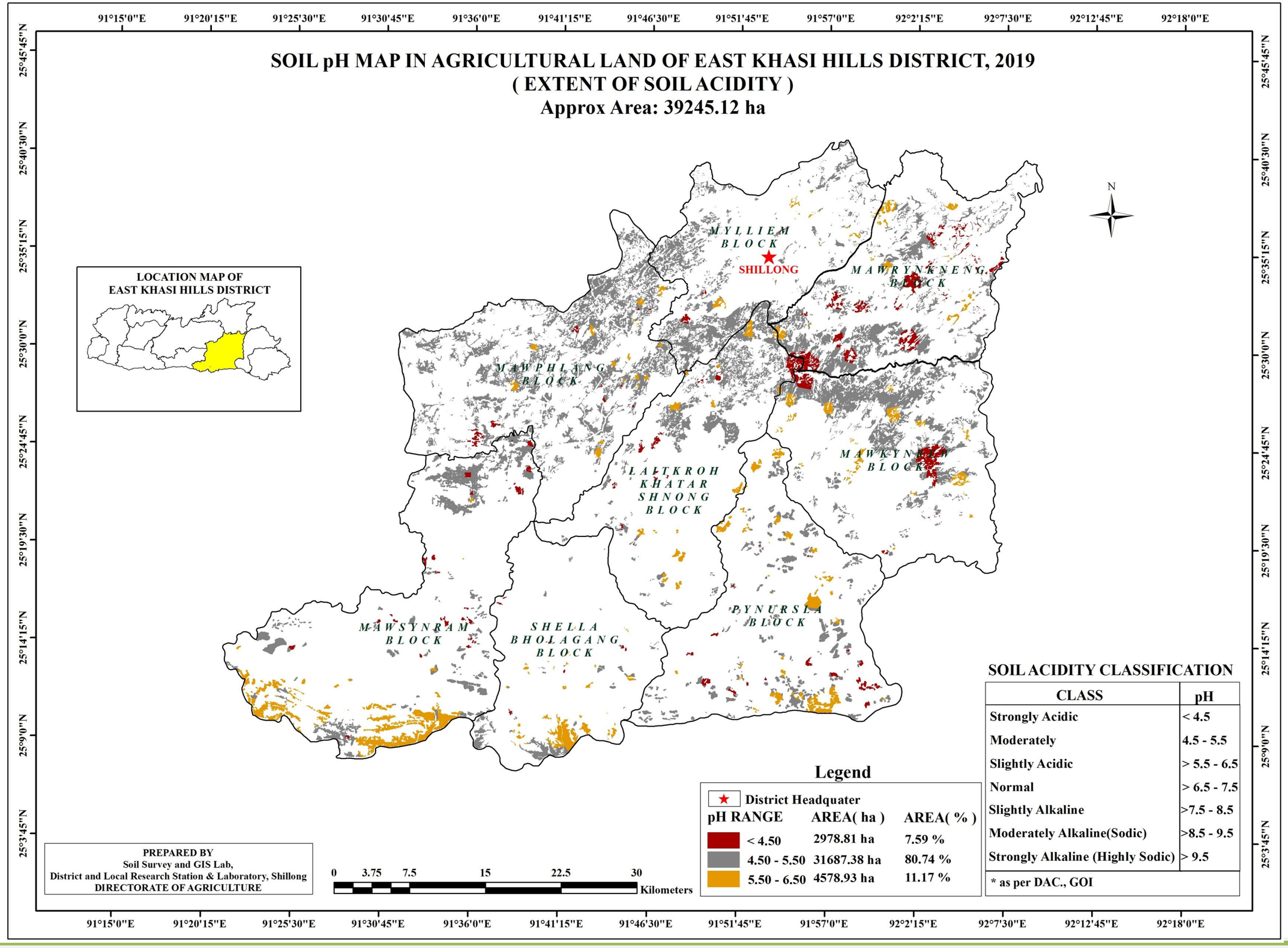
iv. When growing crops belonging to leguminoseae such as peas, beans and cereals like maize, which can uptake high amount of the basic cations, application of liming materials should always be considered to avoid deficiency in succeeding crop or seasons.

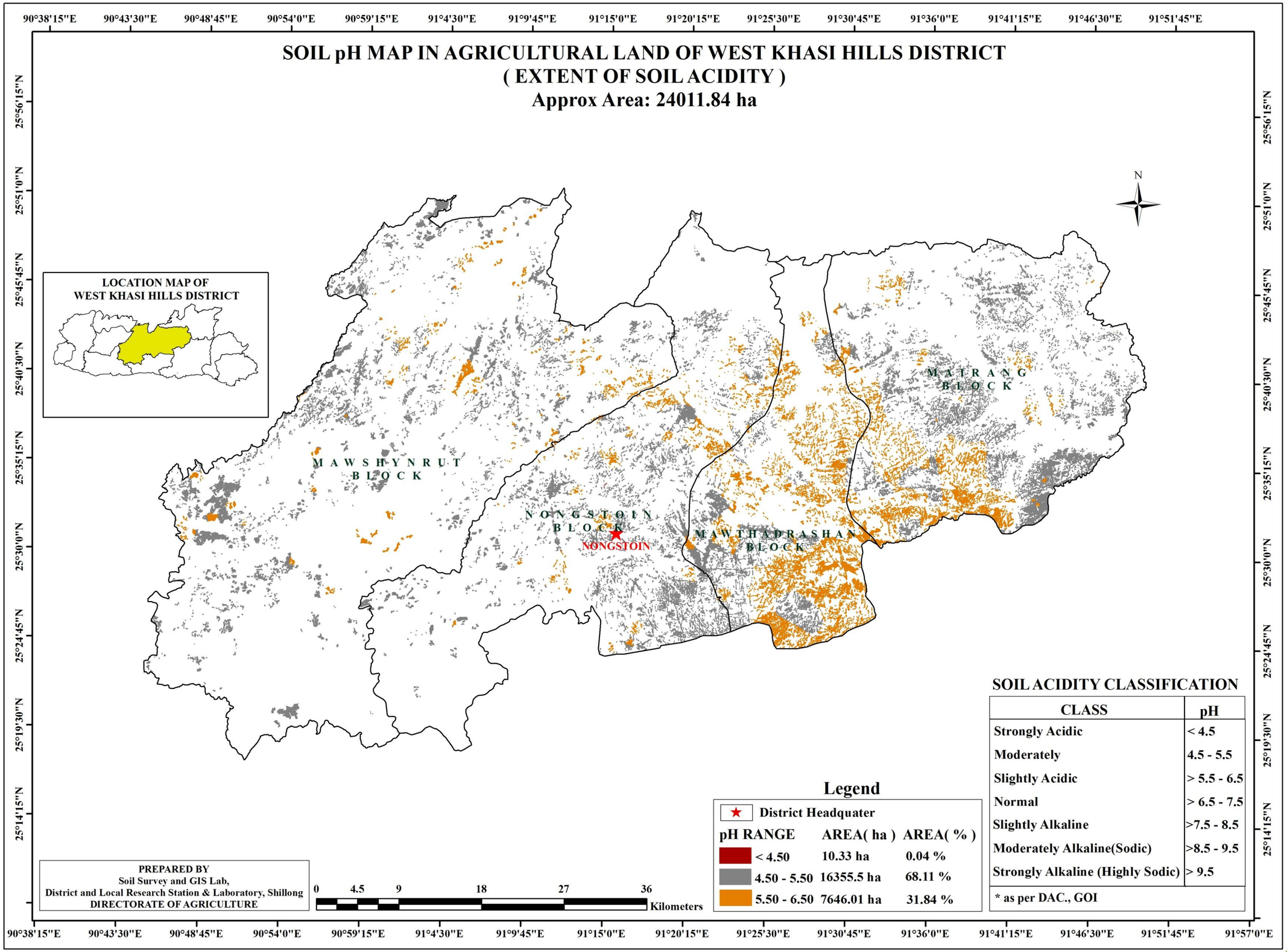
v. For lands with extremely acidic soil reactions of < pH 4.5, nutrient fixation in the soil may occur, besides this, other induced factors such as Iron and Aluminum toxicity can results in stunted growth, and the plant may exhibit deficiency symptoms of Calcium, Magnesium, Nitrogen, and the related physiological disorder. Treatment or reclamation of such areas are necessary for improving the soil health by the adoption of practices such as:

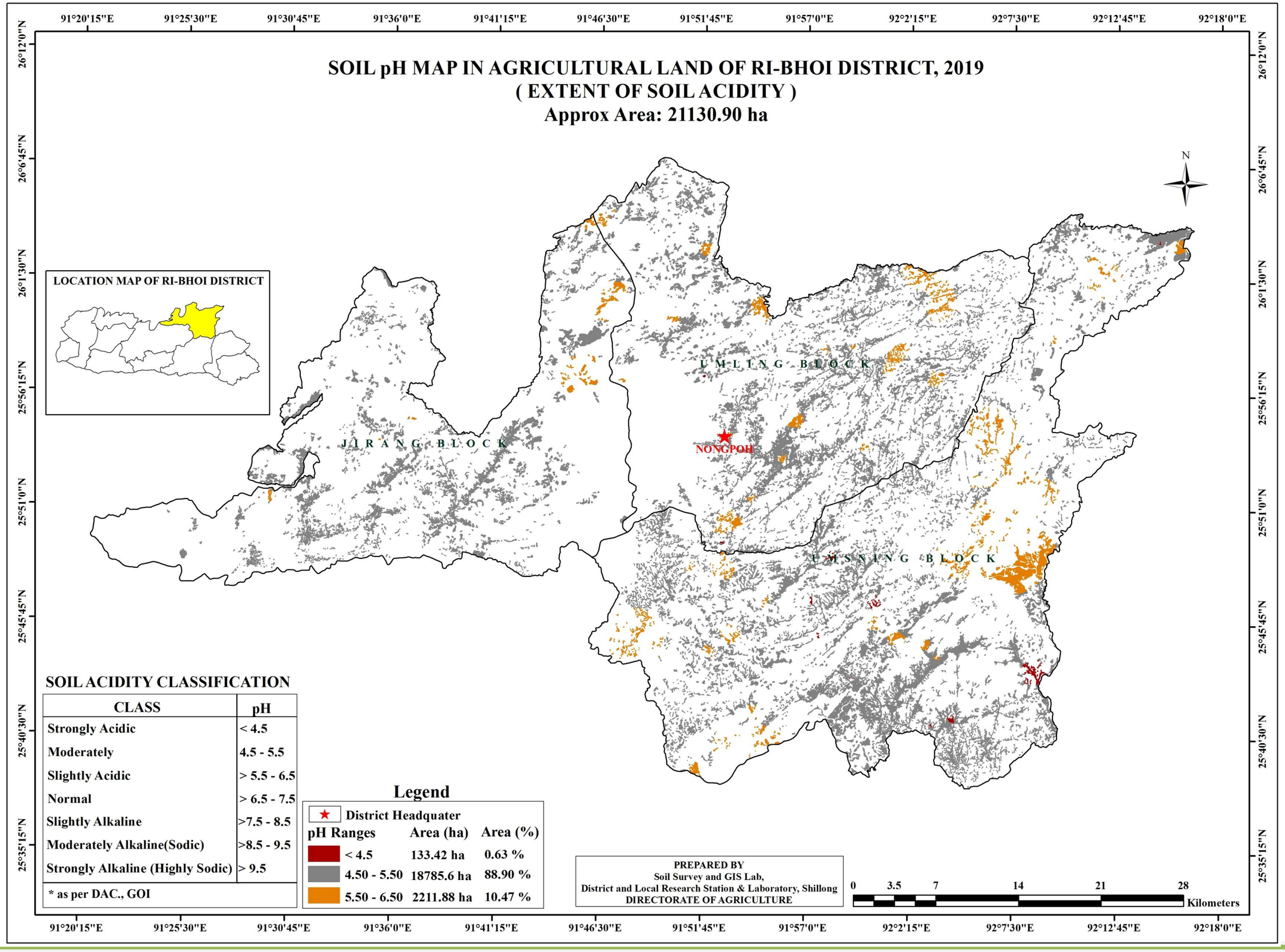
- *Provision of adequate drainage and proper irrigation water management in stagnated lands*
- *Land configuration, re-configuration such as Bunding, Terracing for management of run - off etc.*
- *Application of ameliorative materials such as Lime (dolomite, calcium carbonate) etc,*
- *Application of Organic Manure*
- *The degraded lands with extreme acidity and deteriorated physical condition due to deposition of debris and hazardous chemicals from Mining, Industrial and other Developmental activities ets., can be reclaimed by putting these areas under Green Manuring with grass species, such as the different kinds of fodder grass, legumes and incorporation of biomass into the soils for 2-3 year. This process will help build up Organic Matter and Microorganisms that will aid in improving the soil condition, and the fertility status. The time factor and action of microorganisms will break down the resistant materials and regenerate the soil conditions favorable for crop production in the future.*
- *Selection of adaptable crop cultivars, field crops and spices such as paddy, potato, ginger, turmeric, plantation crops like oil palms, tea, horticultural and fruit crops like cole crops, cassava, pineapple, citrus etc., (FAO, http://www.fao.org/soils-portal/soil-management/management-of-some-problem-soils/acid-soils/en/) which are tolerant to extreme pH.*

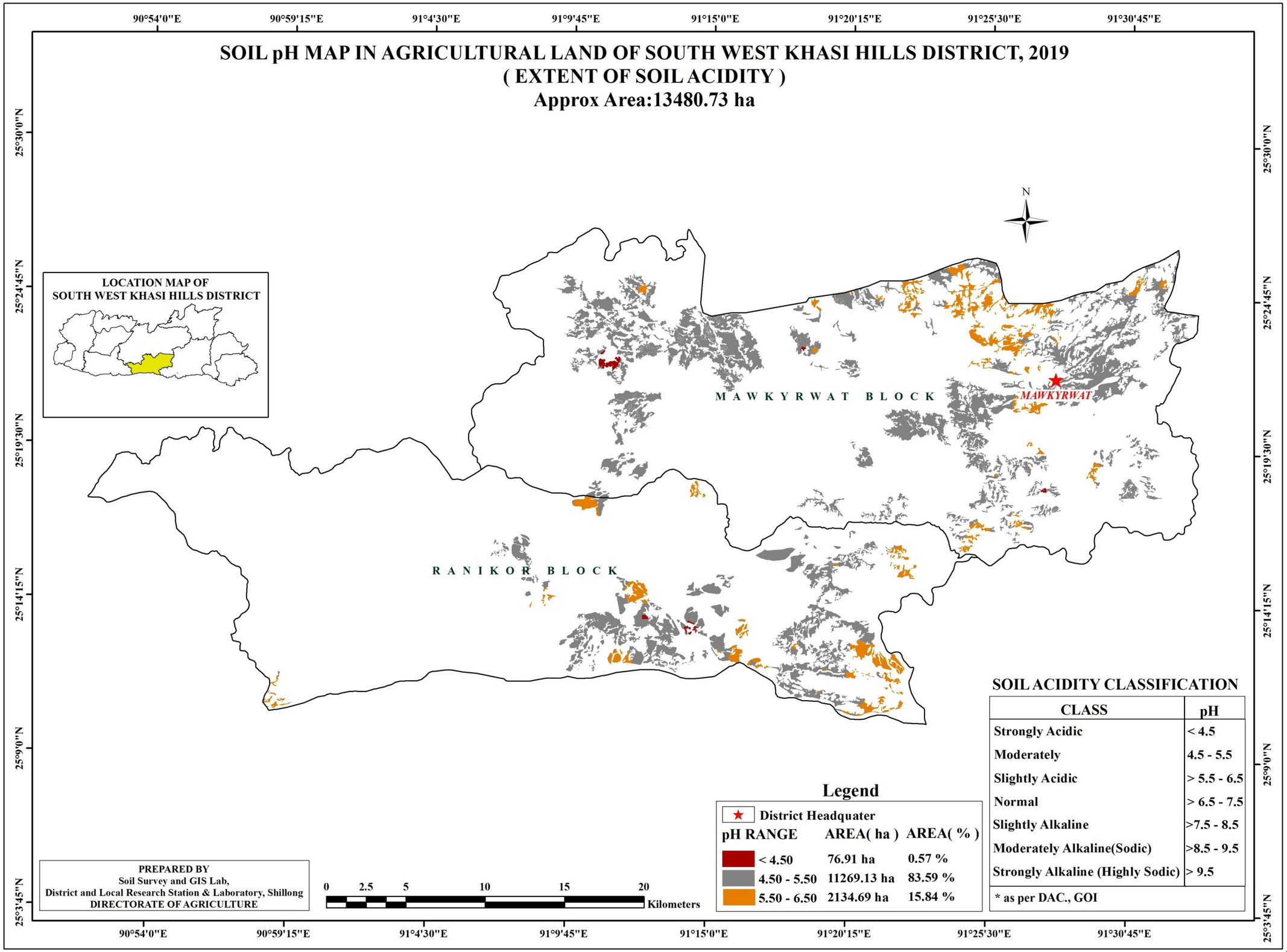

DISTRIBUTION OF SOIL SAMPLING LOCATIONS, MEGHALAYA, 2019
(SOIL HEALTH CARD DATA)
N
LEGEND
Sampling Location
0 10 20 40 60 80
Kilometers
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
89°45'45"E 89°56'15"E 90°6'45"E 90°17'15"E 90°27'45"E 90°38'15"E 90°48'45"E 90°59'15"E 91°9'45"E 91°20'15"E 91°30'45"E 91°41'15"E 91°51'45"E 92°2'15"E 92°12'45"E 92°23'15"E 92°33'45"E 92°44'15"E 92°54'45"E
26°33'0"N 26°22'30"N 26°12'0"N 26°1'30"N 25°51'0"N 25°40'30"N 25°30'0"N 25°19'30"N 25°9'0"N 24°58'30"N 24°48'0"N 24°37'30"N

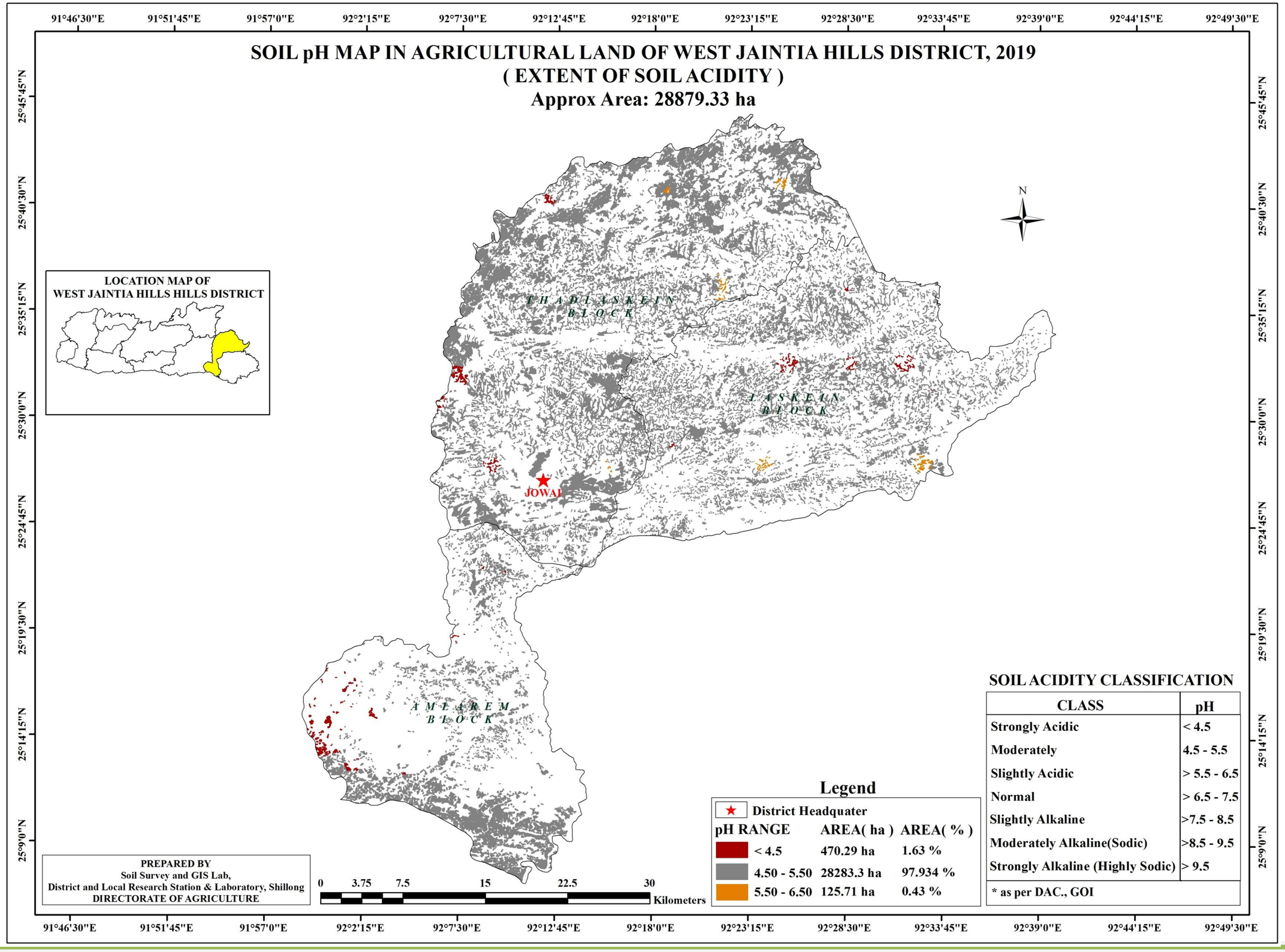

SOIL pH MAP IN AGRICULTURAL LAND OF MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 291591.83 ha
N
North Garo Hills
West Garo Hills
East Garo Hills
South West Garo Hills
South Garo Hills
West Khasi Hills
South West Khasi Hills
East Khasi Hills
Ri-Bhoi
West Jaintia Hills
East Jaintia Hills
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
LEGEND
pH RANGE | AREA(ha) | AREA(%)
< 4.50 | 4355.67 ha | 1.49 %
4.50 - 5.50 | 115052.48 ha | 39.46 %
5.50 - 6.50 | 172183.68 ha | 59.05 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 10 20 40 60 80
Kilometers

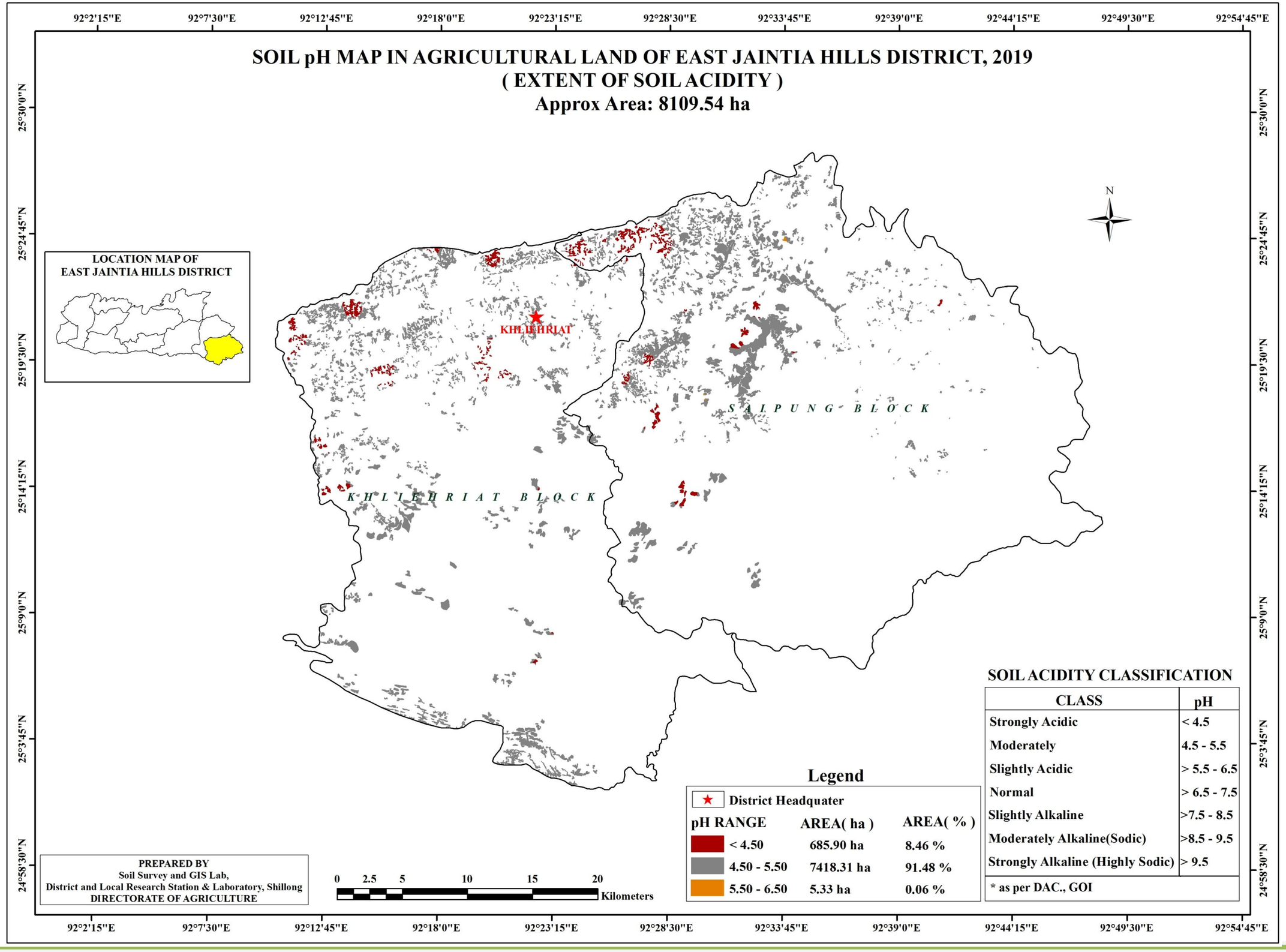

SOIL pH MAP IN AGRICULTURAL LAND OF EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 39245.12 ha
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
MYLLIEM BLOCK
SHILLONG
MAWRYNKNENG BLOCK
MAWPHLANG BLOCK
LALTKROH KHATAR SHNONG BLOCK
MAWKYNROH BLOCK
MAWSYNRAM BLOCK
SHELLA BHOLAGANG BLOCK
PYNURSLA BLOCK
N
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
< 4.50 2978.81 ha 7.59 %
4.50 - 5.50 31687.38 ha 80.74 %
5.50 - 6.50 4578.93 ha 11.17 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 3.75 7.5 15 22.5 30
Kilometers
91°15'0"E 91°20'15"E 91°25'30"E 91°30'45"E 91°36'0"E 91°41'15"E 91°46'30"E 91°51'45"E 91°57'0"E 92°2'15"E 92°7'30"E 92°12'45"E 92°18'0"E
25°45'45"N 25°40'30"N 25°35'15"N 25°30'0"N 25°24'45"N 25°19'30"N 25°14'15"N 25°9'0"N 25°3'45"N

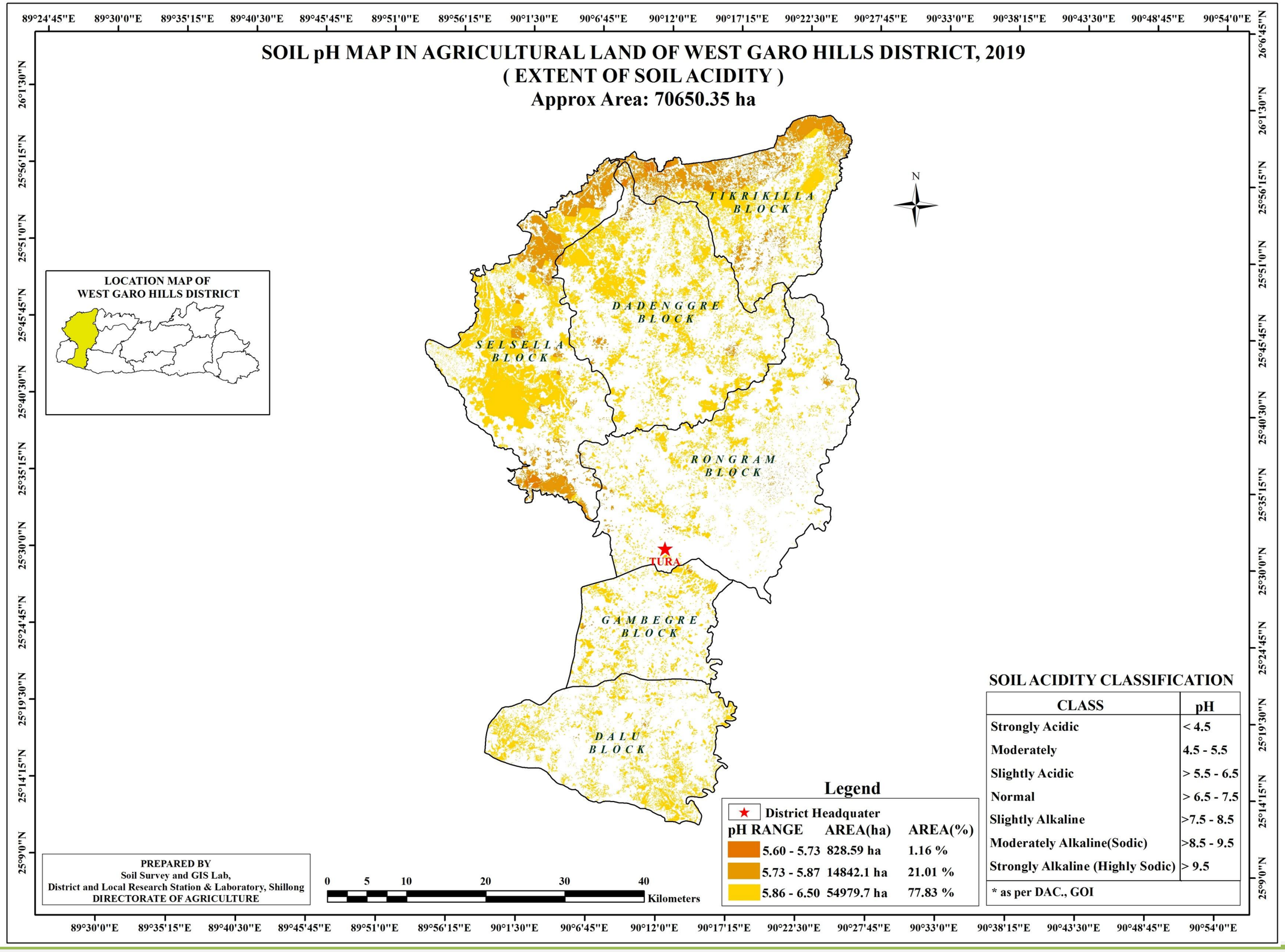

SOIL pH MAP IN AGRICULTURAL LAND OF WEST KHASI HILLS DISTRICT
(EXTENT OF SOIL ACIDITY)
Approx Area: 24011.84 ha
LOCATION MAP OF WEST KHASI HILLS DISTRICT
MAWSHYNRUT BLOCK
NONGSTOIN BLOCK
NONGSTOIN
MAWTHADRASHAN BLOCK
MAIRANG BLOCK
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
< 4.50 10.33 ha 0.04 %
4.50 - 5.50 16355.5 ha 68.11 %
5.50 - 6.50 7646.01 ha 31.84 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 4.5 9 18 27 36
Kilometers
90°38'15"E 90°43'30"E 90°48'45"E 90°54'0"E 90°59'15"E 91°4'30"E 91°9'45"E 91°15'0"E 91°20'15"E 91°25'30"E 91°30'45"E 91°36'0"E 91°41'15"E 91°46'30"E 91°51'45"E 91°57'0"E
25°56'15"N 25°51'0"N 25°45'45"N 25°40'30"N 25°35'15"N 25°30'0"N 25°24'45"N 25°19'30"N 25°14'15"N

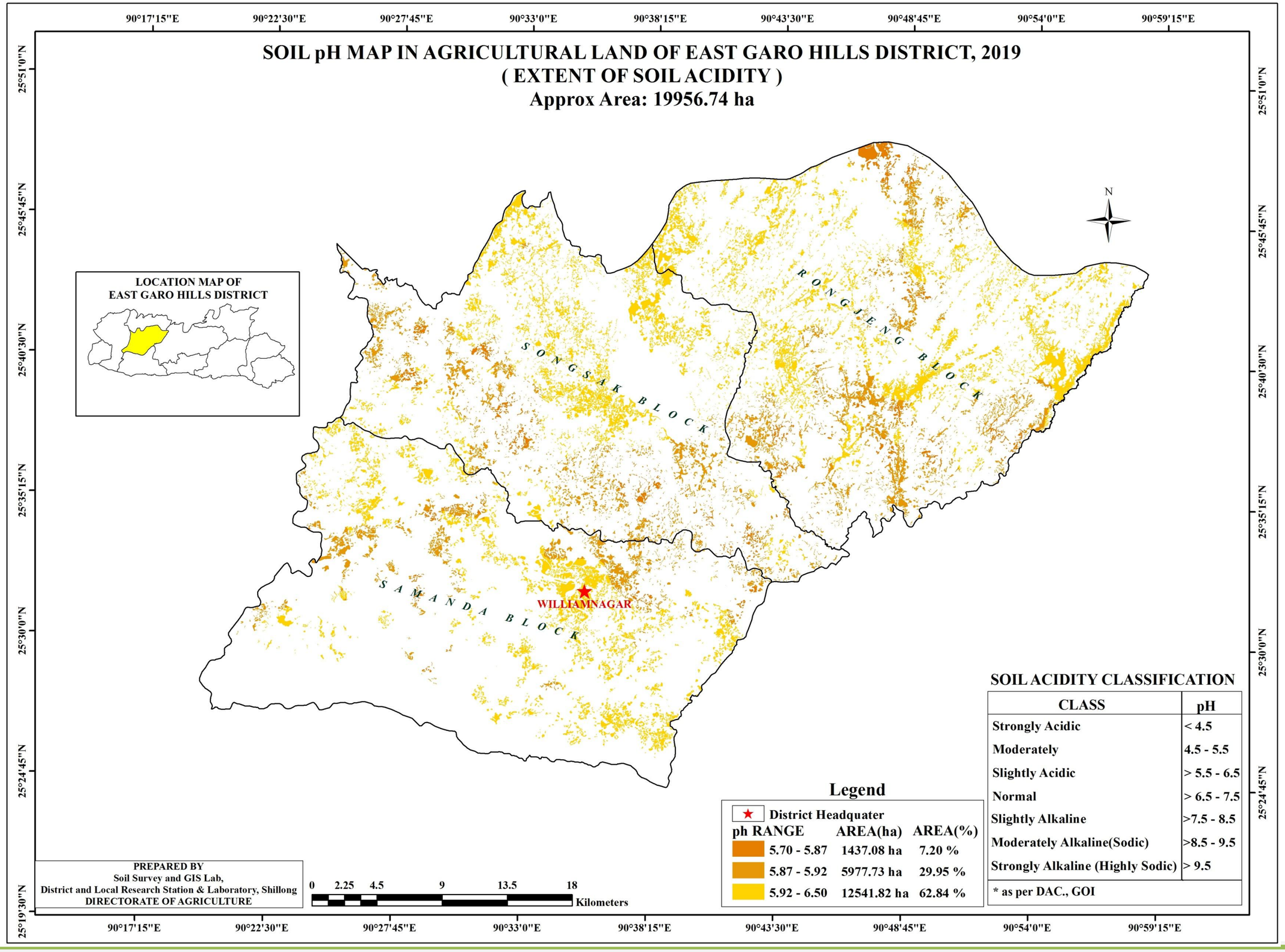

SOIL pH MAP IN AGRICULTURAL LAND OF RI-BHOI DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 21130.90 ha
LOCATION MAP OF RI-BHOI DISTRICT
JIRANG BLOCK
UMLING BLOCK
UMSNING BLOCK
NONGPOH
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
District Headquater
pH Ranges | Area (ha) | Area (%)
< 4.5 | 133.42 ha | 0.63 %
4.50 - 5.50 | 18785.6 ha | 88.90 %
5.50 - 6.50 | 2211.88 ha | 10.47 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 3.5 7 14 21 28
Kilometers
91°20'15"E 91°25'30"E 91°30'45"E 91°36'0"E 91°41'15"E 91°46'30"E 91°51'45"E 91°57'0"E 92°2'15"E 92°7'30"E 92°12'45"E 92°18'0"E
26°12'0"N 26°6'45"N 26°1'30"N 25°56'15"N 25°51'0"N 25°45'45"N 25°40'30"N 25°35'15"N

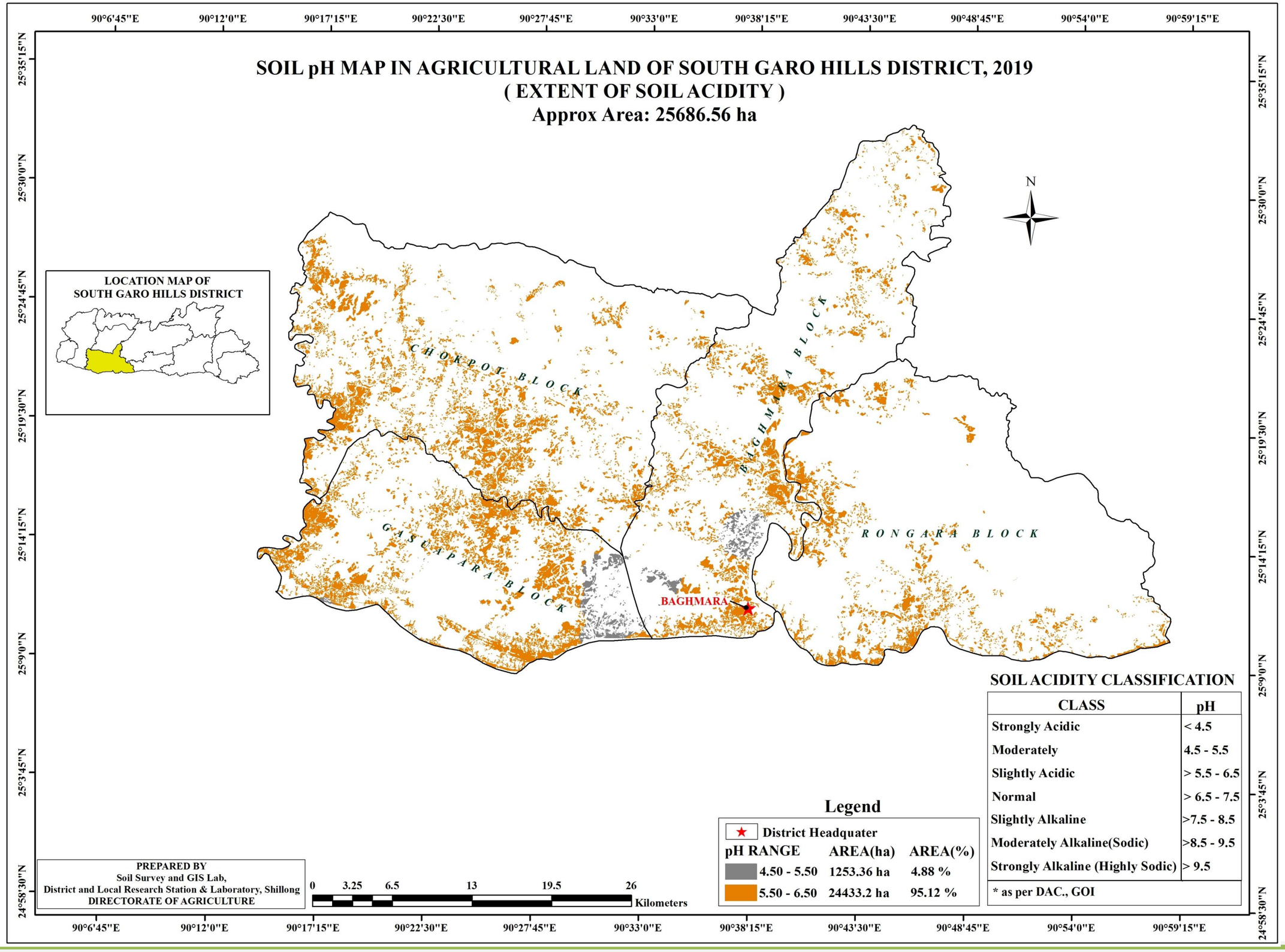

SOIL pH MAP IN AGRICULTURAL LAND OF SOUTH WEST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area:13480.73 ha
90°54'0"E
90°59'15"E
91°4'30"E
91°9'45"E
91°15'0"E
91°20'15"E
91°25'30"E
91°30'45"E
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
25°3'45"N
N
LOCATION MAP OF
SOUTH WEST KHASI HILLS DISTRICT
MAWKYRWAT BLOCK
MAWKYRWAT
RANIKOR BLOCK
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
< 4.50 76.91 ha 0.57 %
4.50 - 5.50 11269.13 ha 83.59 %
5.50 - 6.50 2134.69 ha 15.84 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20
Kilometers

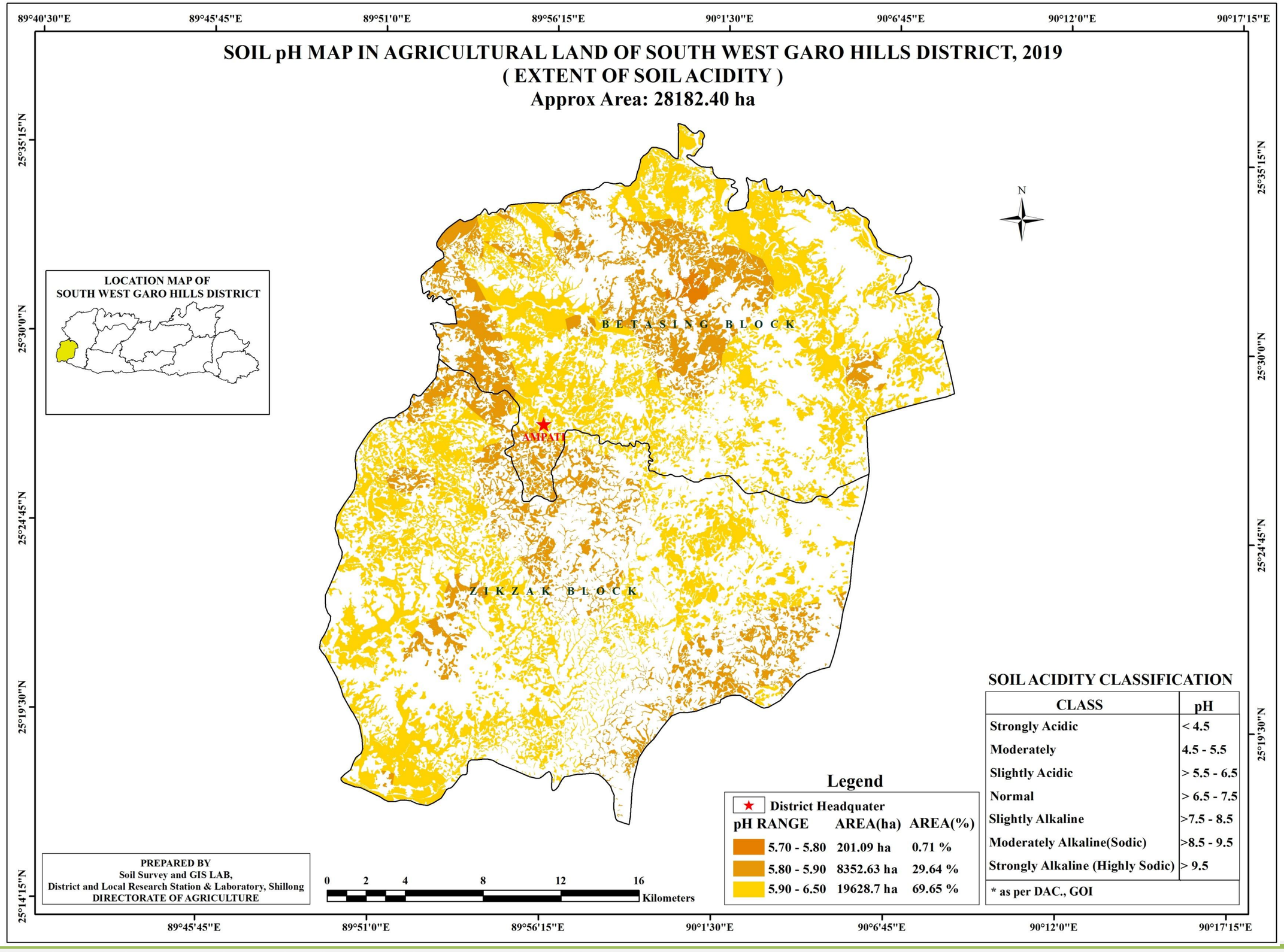

SOIL pH MAP IN AGRICULTURAL LAND OF WEST JAINTIA HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 28879.33 ha
LOCATION MAP OF
WEST JAINTIA HILLS HILLS DISTRICT
THADLASKEIN BLOCK
JASKEIN BLOCK
AMLAREM BLOCK
JOWAI
N
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
< 4.5 470.29 ha 1.63 %
4.50 - 5.50 28283.3 ha 97.934 %
5.50 - 6.50 125.71 ha 0.43 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 3.75 7.5 15 22.5 30
Kilometers
91°46'30"E 91°51'45"E 91°57'0"E 92°2'15"E 92°7'30"E 92°12'45"E 92°18'0"E 92°23'15"E 92°28'30"E 92°33'45"E 92°39'0"E 92°44'15"E 92°49'30"E
25°45'45"N 25°40'30"N 25°35'15"N 25°30'0"N 25°24'45"N 25°19'30"N 25°14'15"N 25°9'0"N

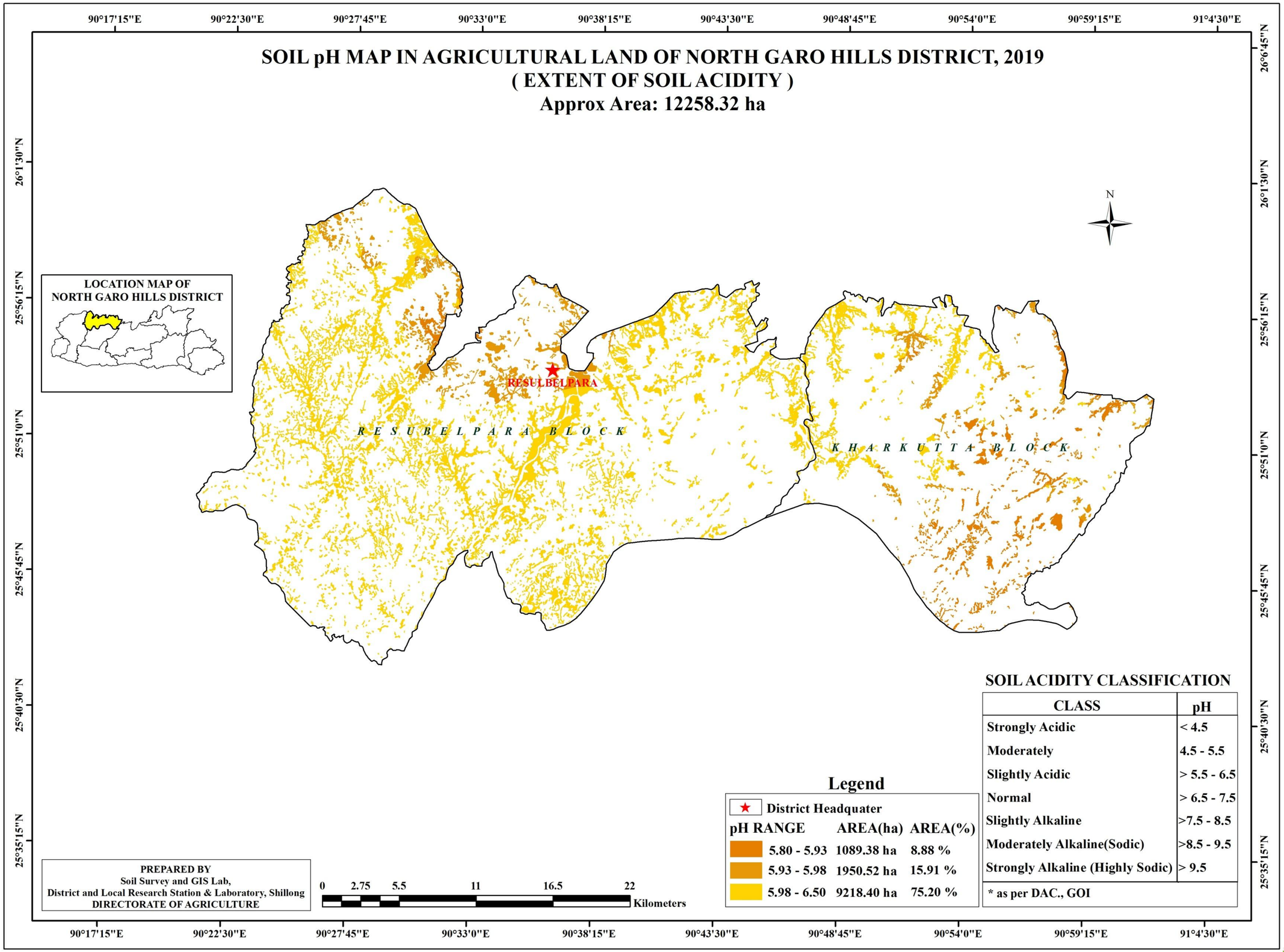

SOIL pH MAP IN AGRICULTURAL LAND OF EAST JAINTIA HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 8109.54 ha
LOCATION MAP OF
EAST JAINTIA HILLS DISTRICT
KHLIEHRIAT
KHLIEHRIAT BLOCK
SAIPUNG BLOCK
N
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
< 4.50 685.90 ha 8.46 %
4.50 - 5.50 7418.31 ha 91.48 %
5.50 - 6.50 5.33 ha 0.06 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20
Kilometers
92°2'15"E
92°7'30"E
92°12'45"E
92°18'0"E
92°23'15"E
92°28'30"E
92°33'45"E
92°39'0"E
92°44'15"E
92°49'30"E
92°54'45"E
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
25°3'45"N
24°58'30"N

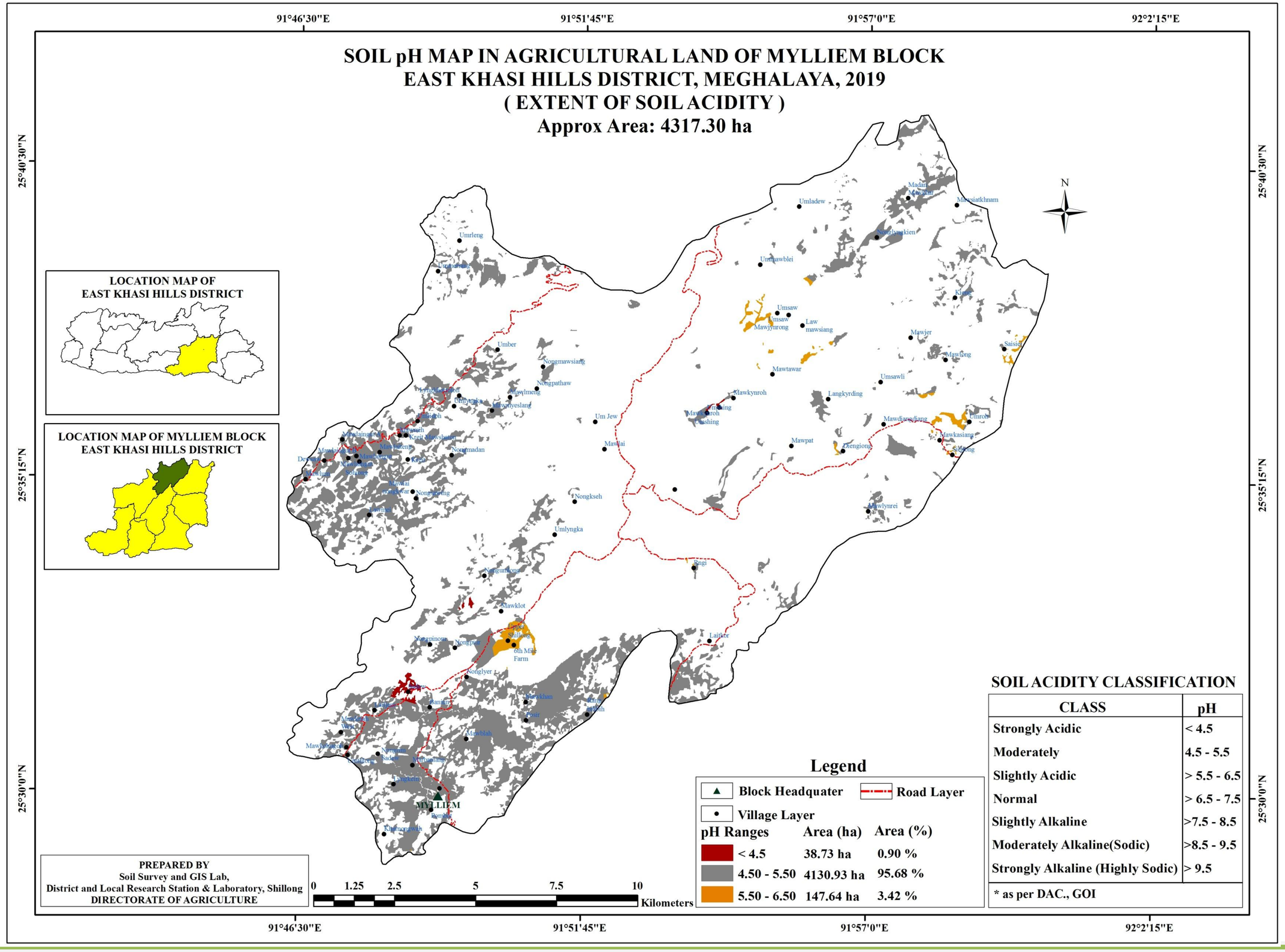

SOIL pH MAP IN AGRICULTURAL LAND OF WEST GARO HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 70650.35 ha
LOCATION MAP OF WEST GARO HILLS DISTRICT
TIKRIKILLA BLOCK
DADENGGRE BLOCK
SELSELLA BLOCK
RONGRAM BLOCK
TURA
GAMBEGRE BLOCK
DALU BLOCK
N
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
5.60 - 5.73 828.59 ha 1.16 %
5.73 - 5.87 14842.1 ha 21.01 %
5.86 - 6.50 54979.7 ha 77.83 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 5 10 20 30 40 Kilometers

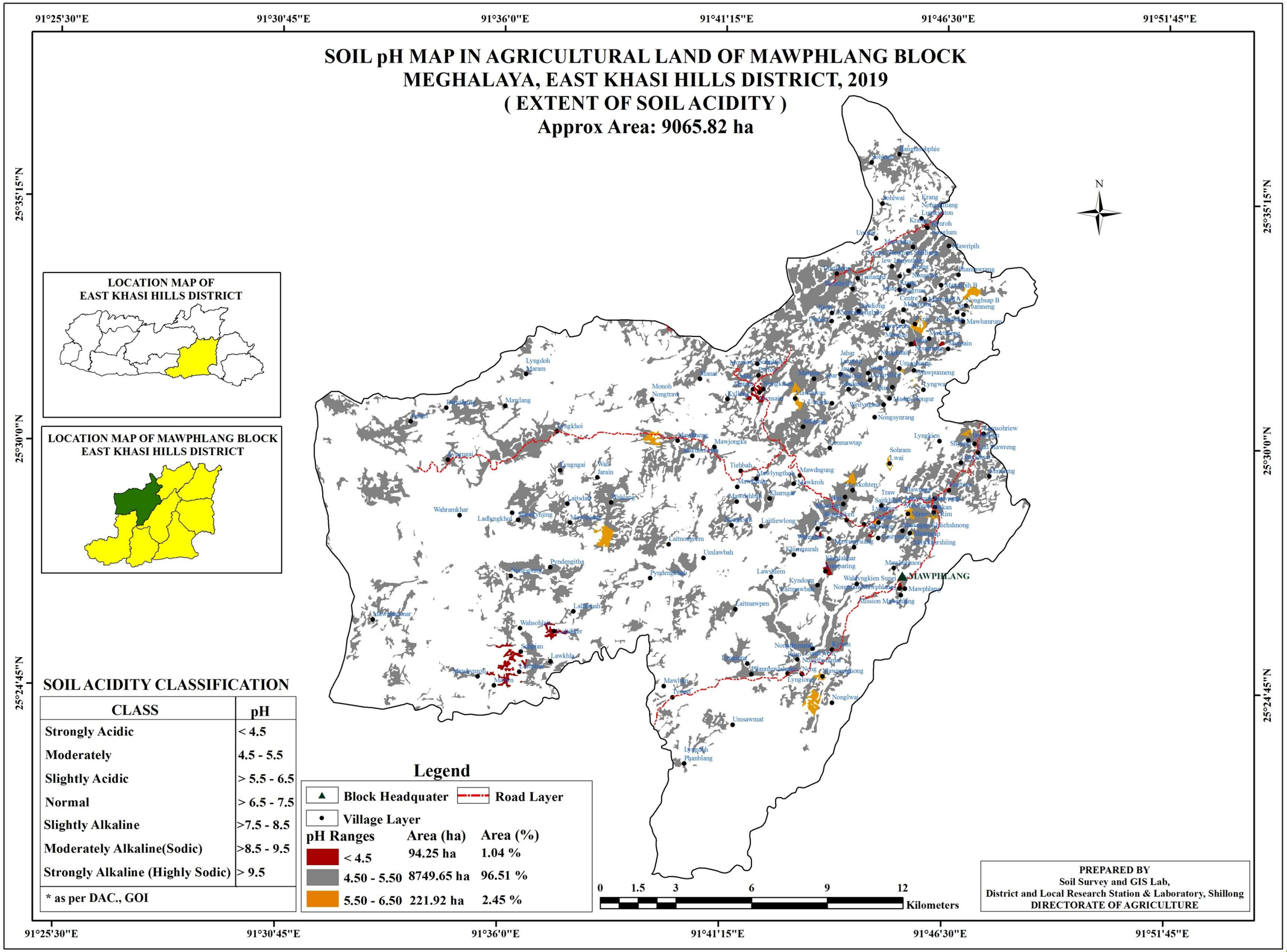

SOIL pH MAP IN AGRICULTURAL LAND OF EAST GARO HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 19956.74 ha
LOCATION MAP OF EAST GARO HILLS DISTRICT
SONGSAK BLOCK
RONGJENG BLOCK
SAMANDA BLOCK
WILLIAMNAGAR
N
90°17'15"E
90°22'30"E
90°27'45"E
90°33'0"E
90°38'15"E
90°43'30"E
90°48'45"E
90°54'0"E
90°59'15"E
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N
25°19'30"N
Legend
District Headquater
ph RANGE AREA(ha) AREA(%)
5.70 - 5.87 1437.08 ha 7.20 %
5.87 - 5.92 5977.73 ha 29.95 %
5.92 - 6.50 12541.82 ha 62.84 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.25 4.5 9 13.5 18
Kilometers

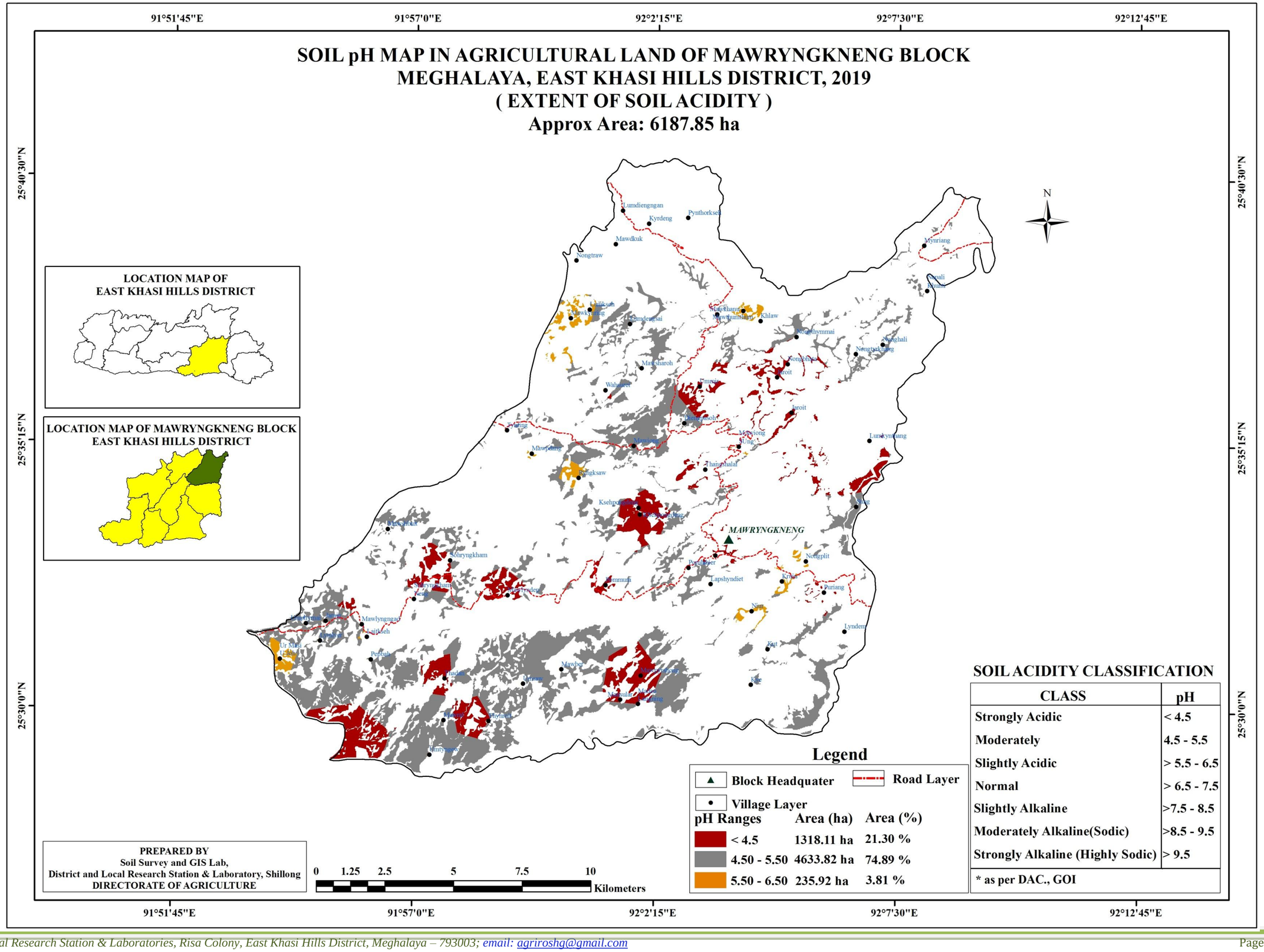

SOIL pH MAP IN AGRICULTURAL LAND OF SOUTH GARO HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 25686.56 ha
LOCATION MAP OF SOUTH GARO HILLS DISTRICT
CHOKPOT BLOCK
BAGHMARA BLOCK
GASUAPARA BLOCK
RONGARA BLOCK
BAGHMARA
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
4.50 - 5.50 1253.36 ha 4.88 %
5.50 - 6.50 24433.2 ha 95.12 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 3.25 6.5 13 19.5 26
Kilometers
90°6'45"E 90°12'0"E 90°17'15"E 90°22'30"E 90°27'45"E 90°33'0"E 90°38'15"E 90°43'30"E 90°48'45"E 90°54'0"E 90°59'15"E
25°35'15"N 25°30'0"N 25°24'45"N 25°19'30"N 25°14'15"N 25°9'0"N 25°3'45"N 24°58'30"N

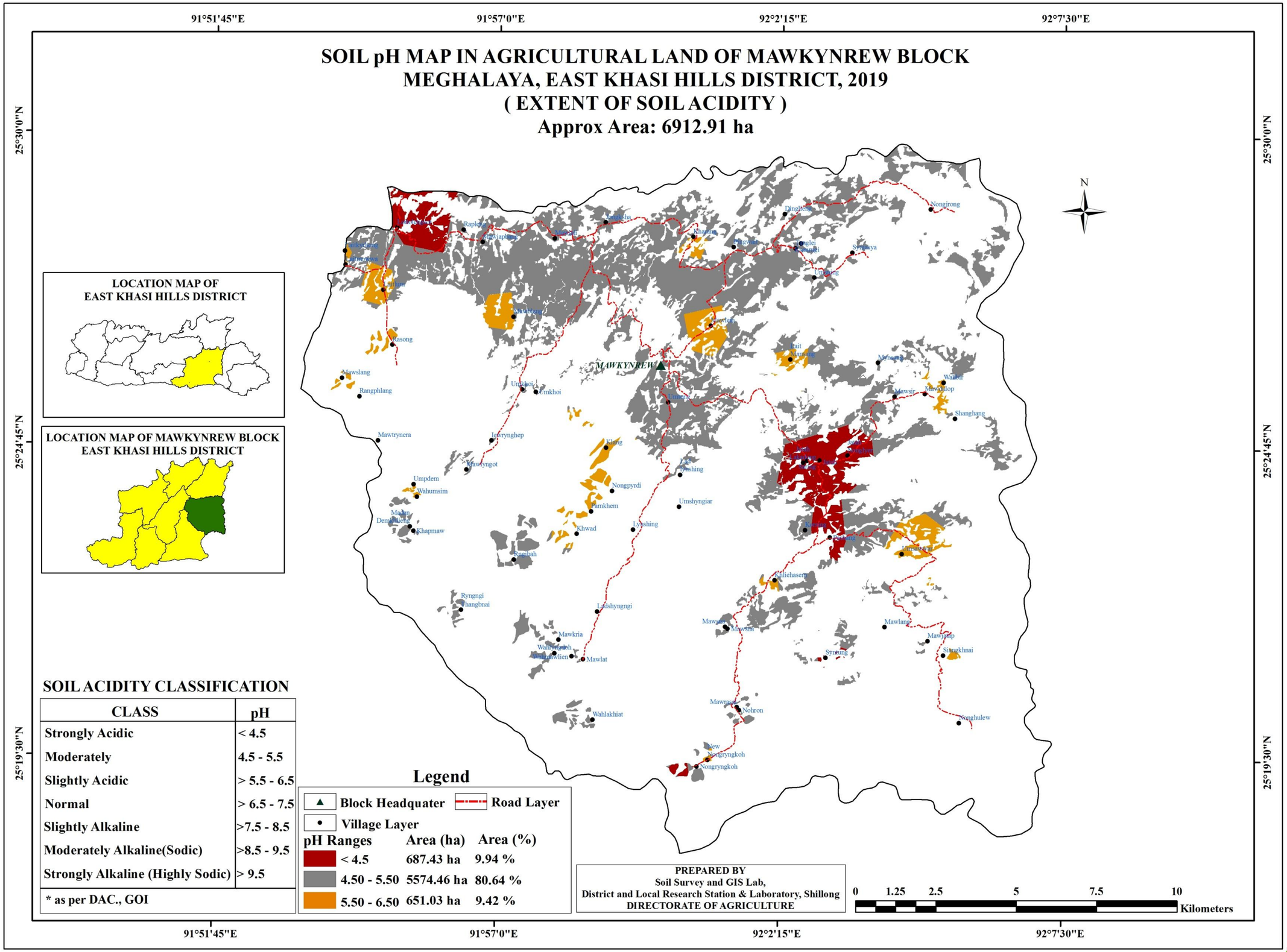

SOIL pH MAP IN AGRICULTURAL LAND OF SOUTH WEST GARO HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 28182.40 ha
89°40'30"E
89°45'45"E
89°51'0"E
89°56'15"E
90°1'30"E
90°6'45"E
90°12'0"E
90°17'15"E
25°35'15"N
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N
N
LOCATION MAP OF
SOUTH WEST GARO HILLS DISTRICT
BETASING BLOCK
AMPATI
ZIKZAK BLOCK
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
5.70 - 5.80 201.09 ha 0.71 %
5.80 - 5.90 8352.63 ha 29.64 %
5.90 - 6.50 19628.7 ha 69.65 %
PREPARED BY
Soil Survey and GIS LAB,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometers

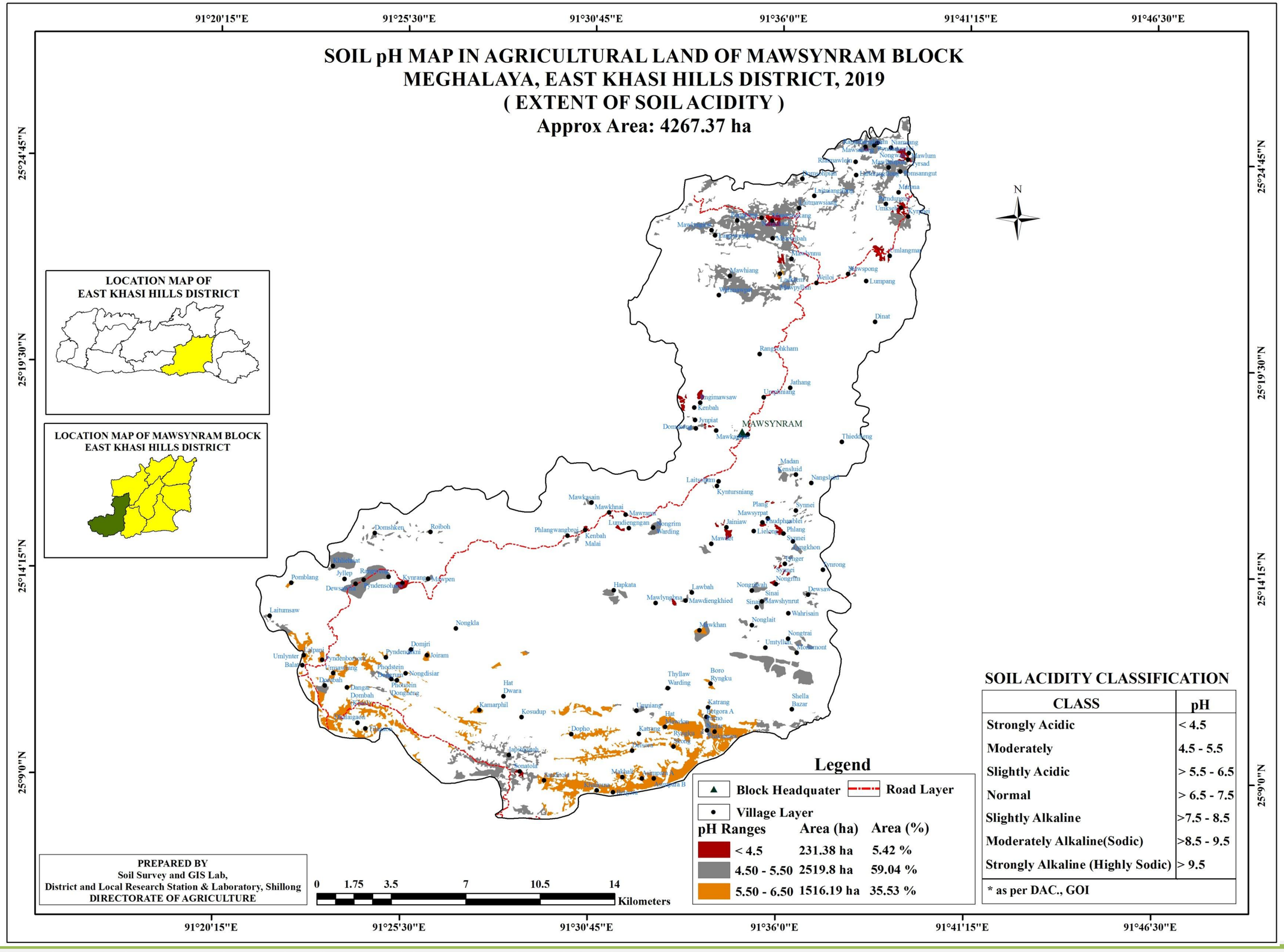

SOIL pH MAP IN AGRICULTURAL LAND OF NORTH GARO HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 12258.32 ha
LOCATION MAP OF NORTH GARO HILLS DISTRICT
RESUBELPARA
R E S U B E L P A R A B L O C K
K H A R K U T T A B L O C K
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
District Headquater
pH RANGE AREA(ha) AREA(%)
5.80 - 5.93 1089.38 ha 8.88 %
5.93 - 5.98 1950.52 ha 15.91 %
5.98 - 6.50 9218.40 ha 75.20 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.75 5.5 11 16.5 22
Kilometers
90°17'15"E 90°22'30"E 90°27'45"E 90°33'0"E 90°38'15"E 90°43'30"E 90°48'45"E 90°54'0"E 90°59'15"E 91°4'30"E
26°6'45"N 26°1'30"N 25°56'15"N 25°51'0"N 25°45'45"N 25°40'30"N 25°35'15"N

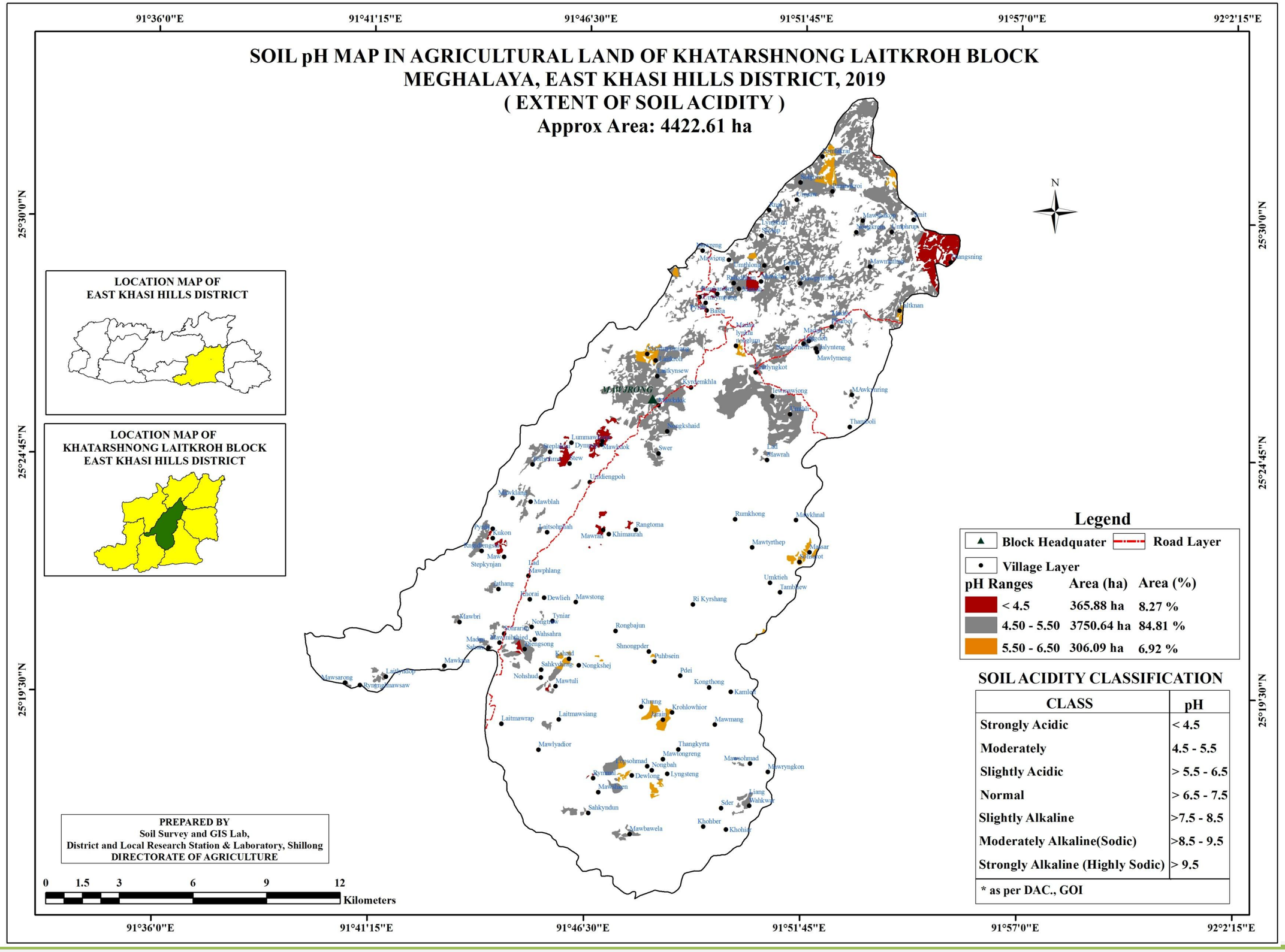

SOIL pH MAP IN AGRICULTURAL LAND OF MYLLIEM BLOCK
EAST KHASI HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 4317.30 ha
91°46'30"E
91°51'45"E
91°57'0"E
92°2'15"E
25°40'30"N
25°35'15"N
25°30'0"N
N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF MYLLIEM BLOCK
EAST KHASI HILLS DISTRICT
Umladew
Madan Cherra
Mawsiatkhnam
Umlawblei
Umsaw
Umsaw
Mawjyrong
Law mawsiang
Mawjer
Saisiej
Mawlong
Mawtawar
Umsawli
Mawkynroh
Langkyrding
Umroh
Mawkasiang
Mawpat
Dienglong
Mawlynrei
Umrleng
Umber
Nongmawsiang
Nongpathaw
Mawlmeng
Um Jew
Mawlai
Nongkseh
Umlyngka
Rigi
Mawklot
Laitkor
Nongpinoing
Nongpoh
Shillong
6th Mile Farm
Nonglyer
Mawblah
Nongkhlaw
MYLLIEM
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges
Area (ha)
Area (%)
< 4.5
38.73 ha
0.90 %
4.50 - 5.50
4130.93 ha
95.68 %
5.50 - 6.50
147.64 ha
3.42 %
SOIL ACIDITY CLASSIFICATION
CLASS
pH
Strongly Acidic
< 4.5
Moderately
4.5 - 5.5
Slightly Acidic
> 5.5 - 6.5
Normal
> 6.5 - 7.5
Slightly Alkaline
>7.5 - 8.5
Moderately Alkaline(Sodic)
>8.5 - 9.5
Strongly Alkaline (Highly Sodic)
> 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0
1.25
2.5
5
7.5
10
Kilometers

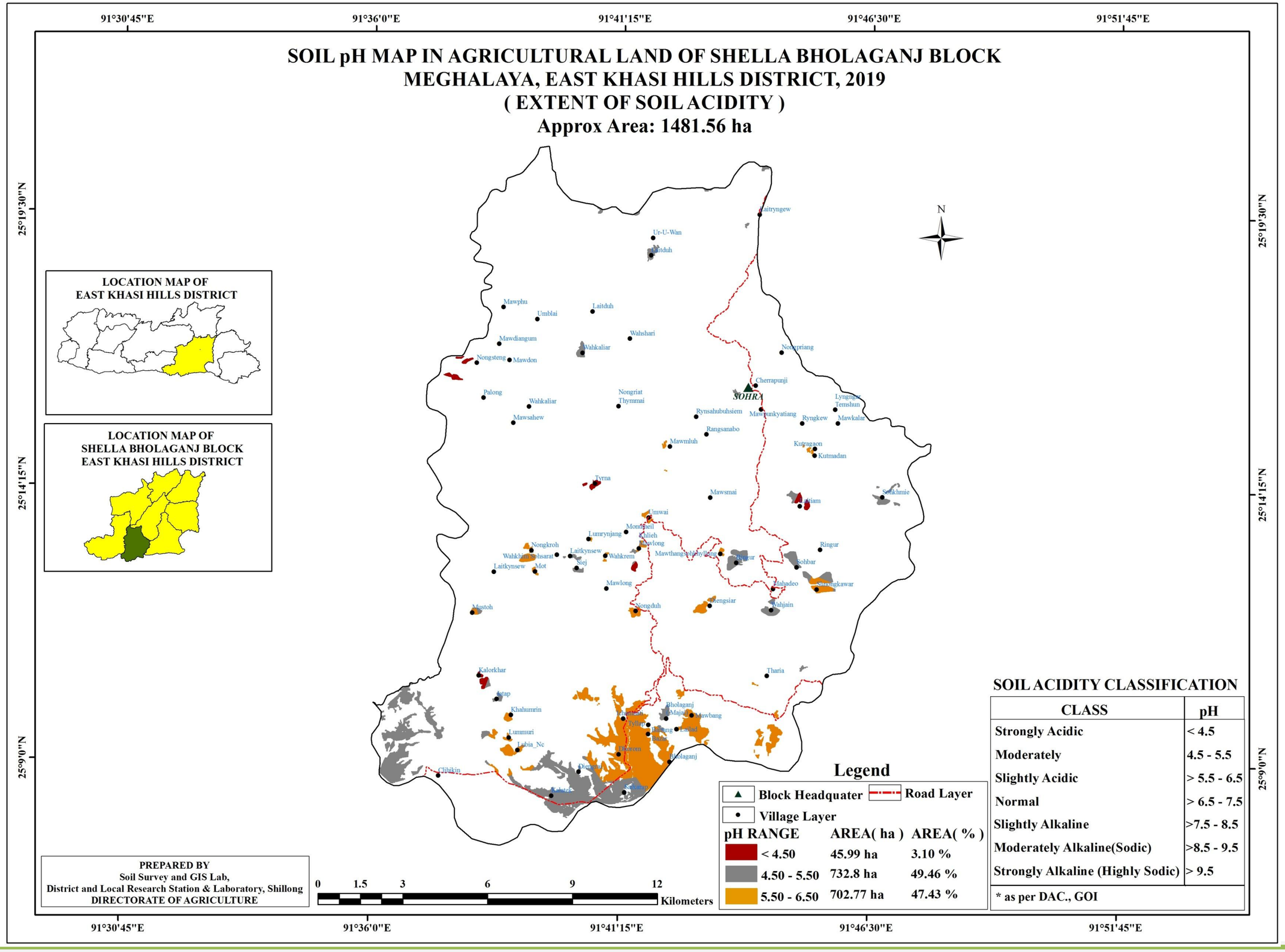

SOIL pH MAP IN AGRICULTURAL LAND OF MAWPHLANG BLOCK
MEGHALAYA, EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 9065.82 ha
91°25'30"E
91°30'45"E
91°36'0"E
91°41'15"E
91°46'30"E
91°51'45"E
25°35'15"N
25°30'0"N
25°24'45"N
N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF MAWPHLANG BLOCK
EAST KHASI HILLS DISTRICT
MAWPHLANG
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
< 4.5 | 94.25 ha | 1.04 %
4.50 - 5.50 | 8749.65 ha | 96.51 %
5.50 - 6.50 | 221.92 ha | 2.45 %
0 1.5 3 6 9 12
Kilometers
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE

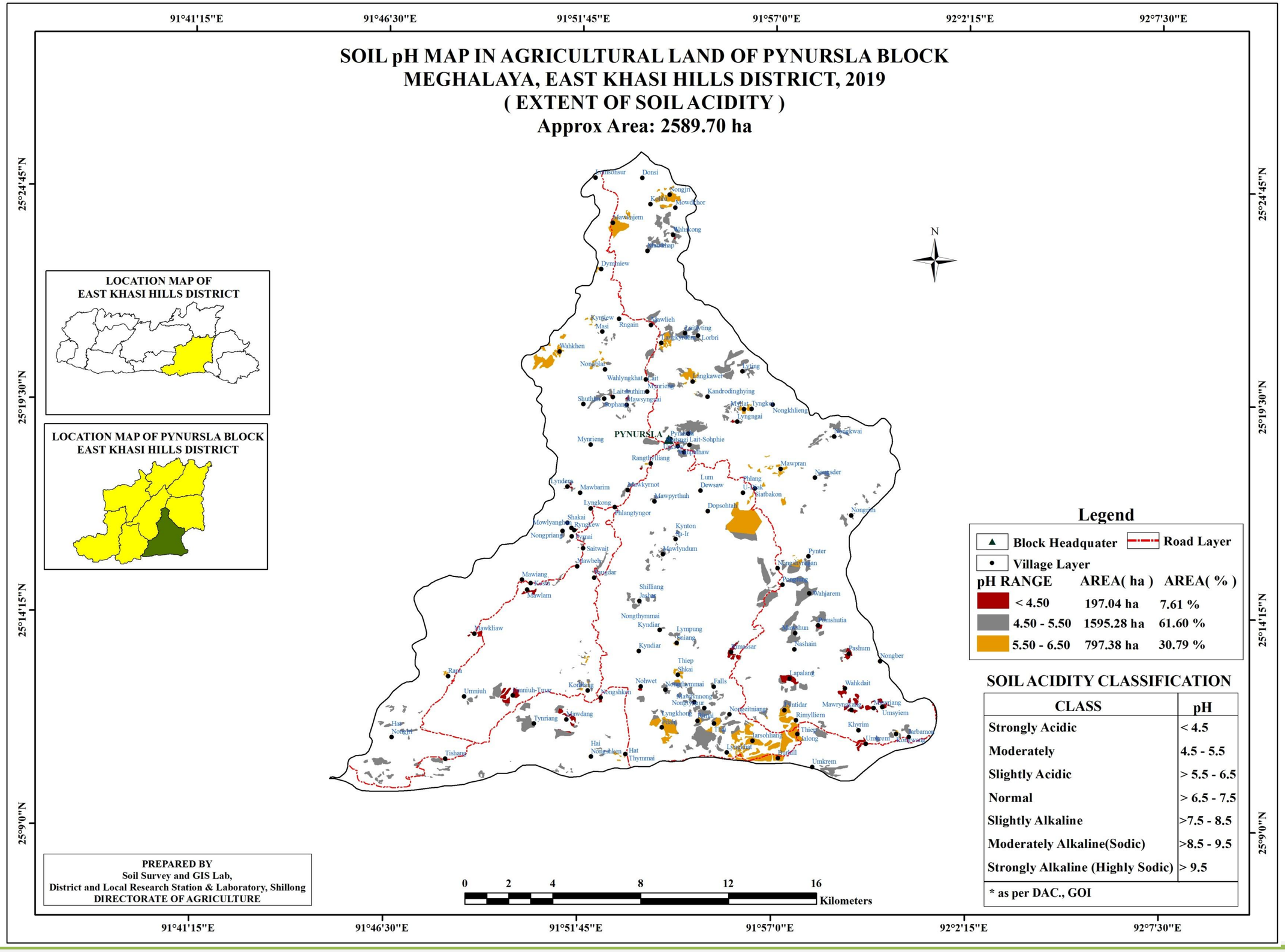

SOIL pH MAP IN AGRICULTURAL LAND OF MAWRYNGKNENG BLOCK
MEGHALAYA, EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 6187.85 ha
91°51'45"E
91°57'0"E
92°2'15"E
92°7'30"E
92°12'45"E
25°40'30"N
25°35'15"N
25°30'0"N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF MAWRYNGKNENG BLOCK
EAST KHASI HILLS DISTRICT
MAWRYNGKNENG
N
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
< 4.5 1318.11 ha 21.30 %
4.50 - 5.50 4633.82 ha 74.89 %
5.50 - 6.50 235.92 ha 3.81 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.25 2.5 5 7.5 10
Kilometers

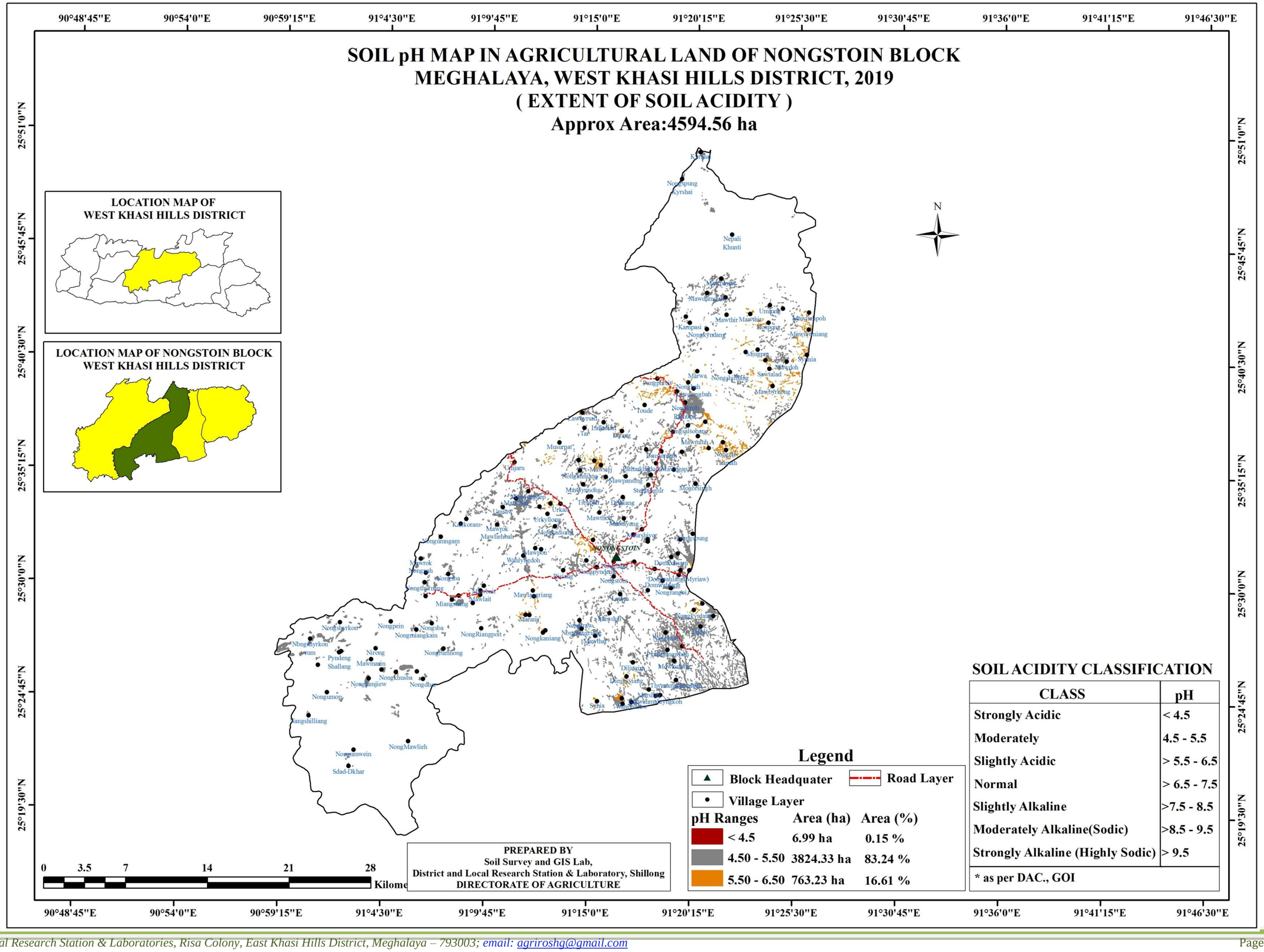

SOIL pH MAP IN AGRICULTURAL LAND OF MAWKYNREW BLOCK
MEGHALAYA, EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 6912.91 ha
91°51'45"E
91°57'0"E
92°2'15"E
92°7'30"E
25°30'0"N
25°24'45"N
25°19'30"N
N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF MAWKYNREW BLOCK
EAST KHASI HILLS DISTRICT
MAWKYNREW
Nongjrong
Dingdeng
Rapliang
Mawkdok
Khadum
Pilangwan
Nongkhlaw
Sohsiyar
Umlong
Mawlum
Rasong
Mawlang
Mawslang
Rangphlang
Umkhoi
Umkhoi
Umtong
Mawsir
Mawpilop
Shanghang
Mawtrynera
Iewrynghep
Mawyngot
Klong
Umpdem
Wahumsim
Nongpyrdi
Pamkhem
Umshyngiar
Khapmaw
Khwad
Lyngshing
Rngibah
Ryngngi
Thangbnai
Lyngshyngngi
Mawkria
Mawlat
Wahlakhiat
Mawlang
Mawpilop
Siangkhnai
Nongrynghulew
Nongryngkoh
Nongryngkoh
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
< 4.5 | 687.43 ha | 9.94 %
4.50 - 5.50 | 5574.46 ha | 80.64 %
5.50 - 6.50 | 651.03 ha | 9.42 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.25 2.5 5 7.5 10
Kilometers

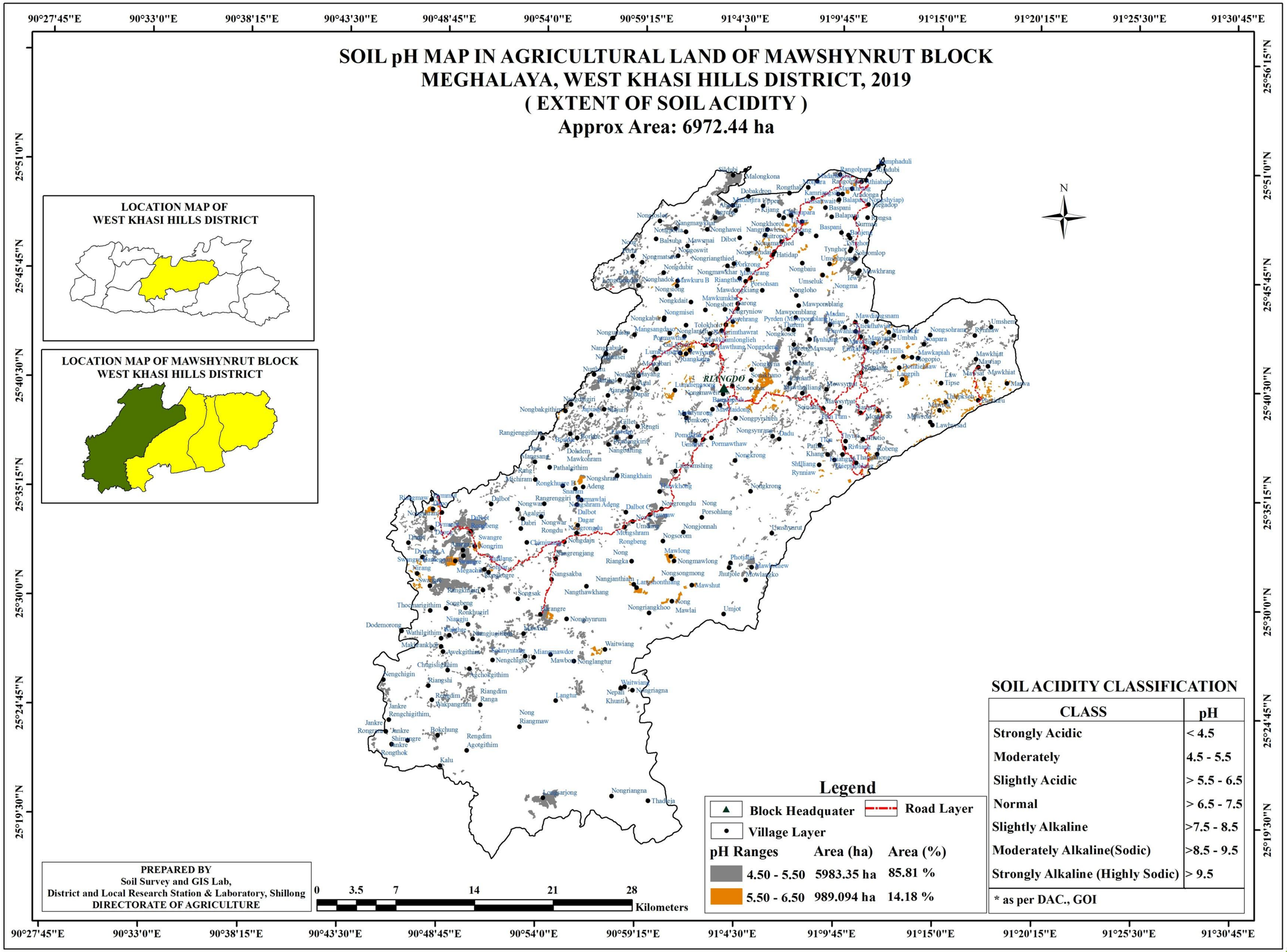

SOIL pH MAP IN AGRICULTURAL LAND OF MAWSYNRAM BLOCK
MEGHALAYA, EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 4267.37 ha
91°20'15"E
91°25'30"E
91°30'45"E
91°36'0"E
91°41'15"E
91°46'30"E
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF MAWSYNRAM BLOCK
EAST KHASI HILLS DISTRICT
MAWSYNRAM
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
< 4.5 231.38 ha 5.42 %
4.50 - 5.50 2519.8 ha 59.04 %
5.50 - 6.50 1516.19 ha 35.53 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.75 3.5 7 10.5 14
Kilometers

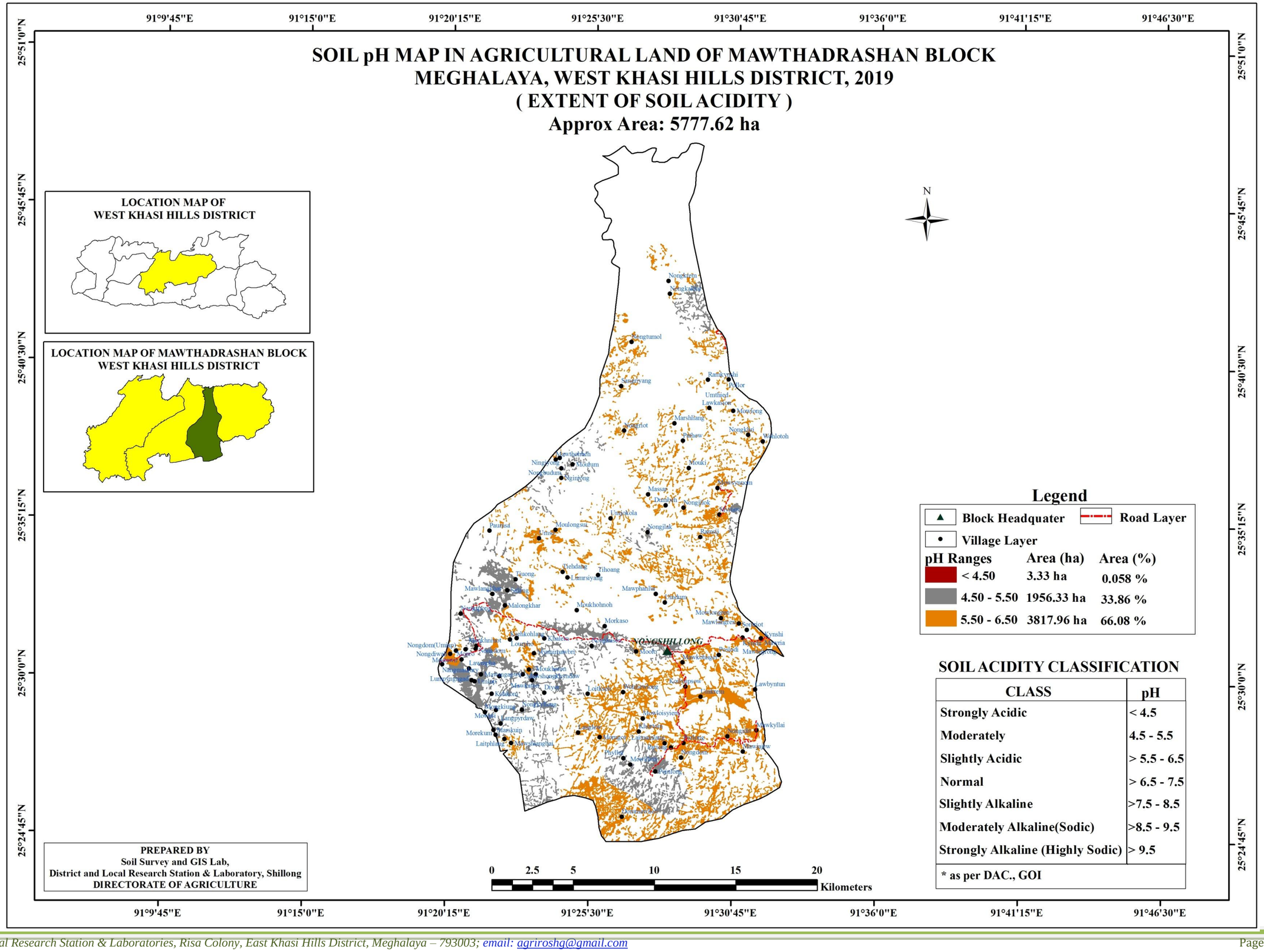

SOIL pH MAP IN AGRICULTURAL LAND OF KHATARSHNONG LAITKROH BLOCK
MEGHALAYA, EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 4422.61 ha
91°36'0"E
91°41'15"E
91°46'30"E
91°51'45"E
91°57'0"E
92°2'15"E
25°30'0"N
25°24'45"N
25°19'30"N
N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF
KHATARSHNONG LAITKROH BLOCK
EAST KHASI HILLS DISTRICT
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
< 4.5 365.88 ha 8.27 %
4.50 - 5.50 3750.64 ha 84.81 %
5.50 - 6.50 306.09 ha 6.92 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.5 3 6 9 12
Kilometers

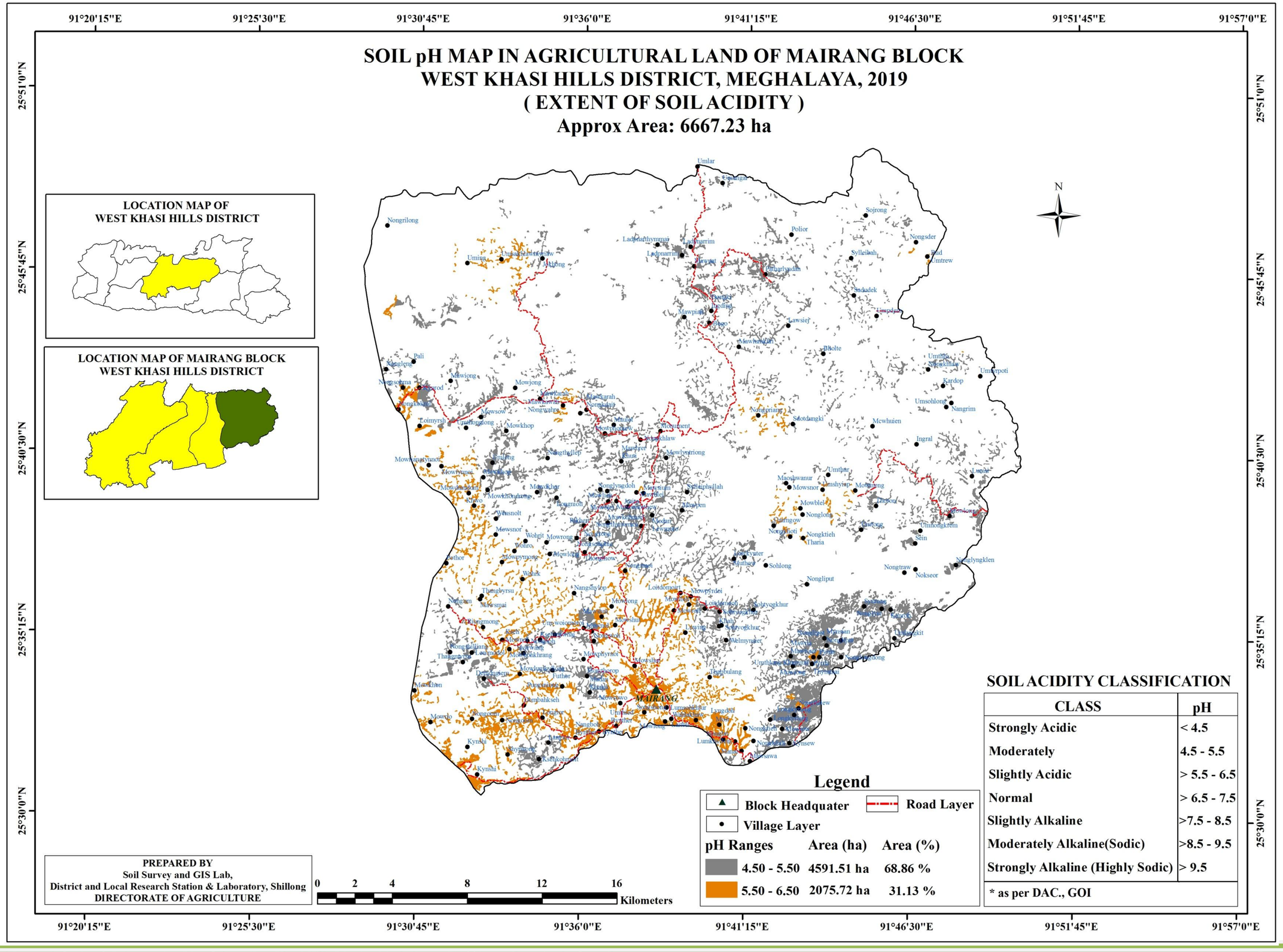

SOIL pH MAP IN AGRICULTURAL LAND OF SHELLA BHOLAGANJ BLOCK
MEGHALAYA, EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 1481.56 ha
91°30'45"E
91°36'0"E
91°41'15"E
91°46'30"E
91°51'45"E
25°19'30"N
25°14'15"N
25°9'0"N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF
SHELLA BHOLAGANJ BLOCK
EAST KHASI HILLS DISTRICT
N
SOHRA
Cherrapunji
Laitryngew
Ur-U-Wan
Mawphu
Umblai
Laitduh
Mawdiangum
Nongsteng
Mawdon
Palong
Wahkaliar
Mawsahew
Nongriat
Thymmai
Rynsahubuhsiem
Rangsanabo
Mawmluh
Ryngkew
Mawkalar
Kutragaon
Kutmadan
Tyrna
Mawsmai
Umwai
Lumrynjang
Nongkroh
Laitkynsew
Wahkrem
Mot
Mawlong
Mawthangkhlyllong
Ringur
Sohbar
Mahadeo
Nongduh
Mustoh
Kalorkhar
Tharia
Khahumrin
Lummuri
Bholaganj
Mawbang
Dhorom
Gibikin
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE
AREA(ha)
AREA(%)
< 4.50
45.99 ha
3.10 %
4.50 - 5.50
732.8 ha
49.46 %
5.50 - 6.50
702.77 ha
47.43 %
SOIL ACIDITY CLASSIFICATION
CLASS
pH
Strongly Acidic
< 4.5
Moderately
4.5 - 5.5
Slightly Acidic
> 5.5 - 6.5
Normal
> 6.5 - 7.5
Slightly Alkaline
>7.5 - 8.5
Moderately Alkaline(Sodic)
>8.5 - 9.5
Strongly Alkaline (Highly Sodic)
> 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0
1.5
3
6
9
12
Kilometers

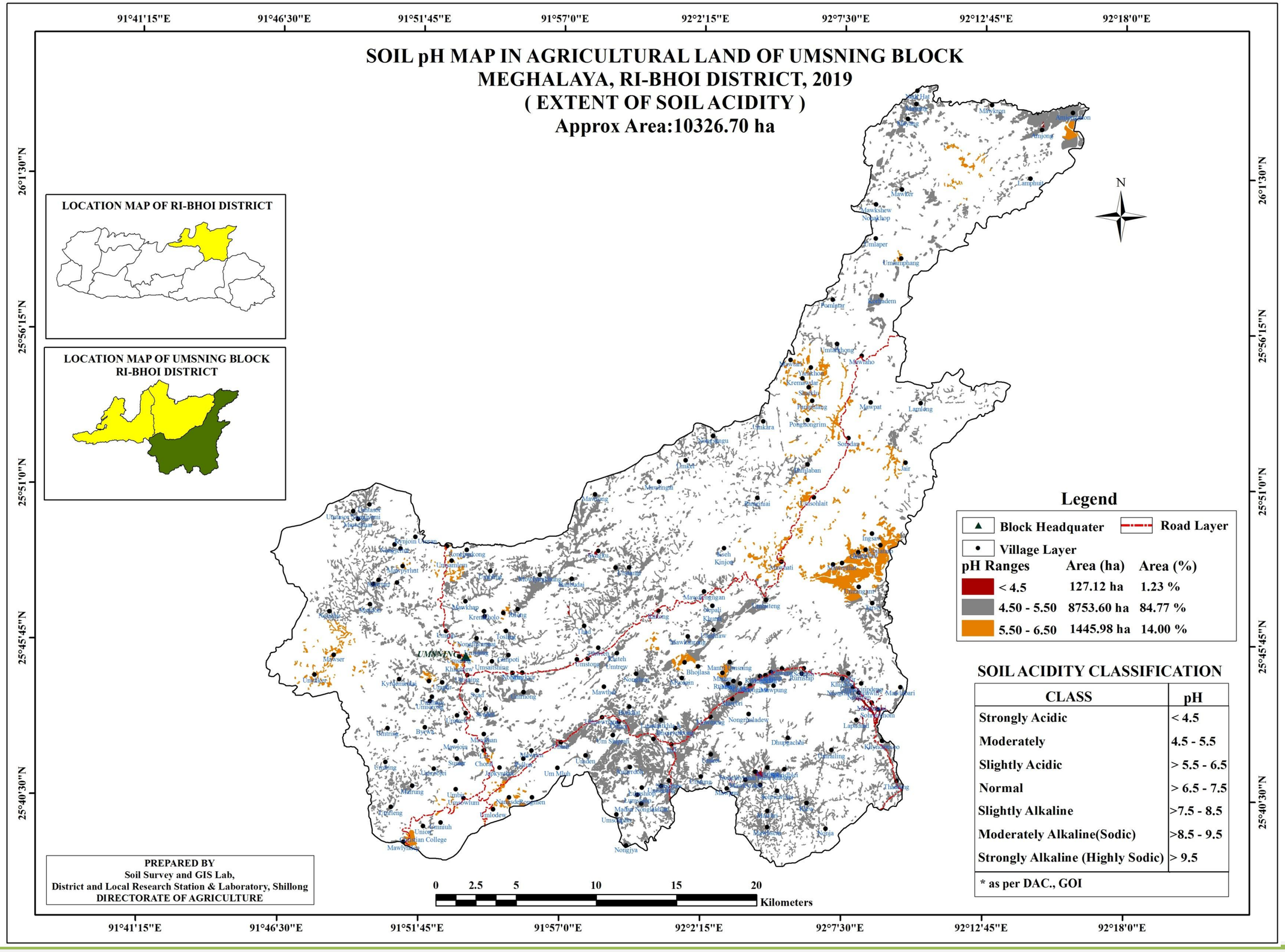

SOIL pH MAP IN AGRICULTURAL LAND OF PYNURSLA BLOCK
MEGHALAYA, EAST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 2589.70 ha
91°41'15"E
91°46'30"E
91°51'45"E
91°57'0"E
92°2'15"E
92°7'30"E
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
LOCATION MAP OF
EAST KHASI HILLS DISTRICT
LOCATION MAP OF PYNURSLA BLOCK
EAST KHASI HILLS DISTRICT
N
PYNURSLA
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
< 4.50 197.04 ha 7.61 %
4.50 - 5.50 1595.28 ha 61.60 %
5.50 - 6.50 797.38 ha 30.79 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometers

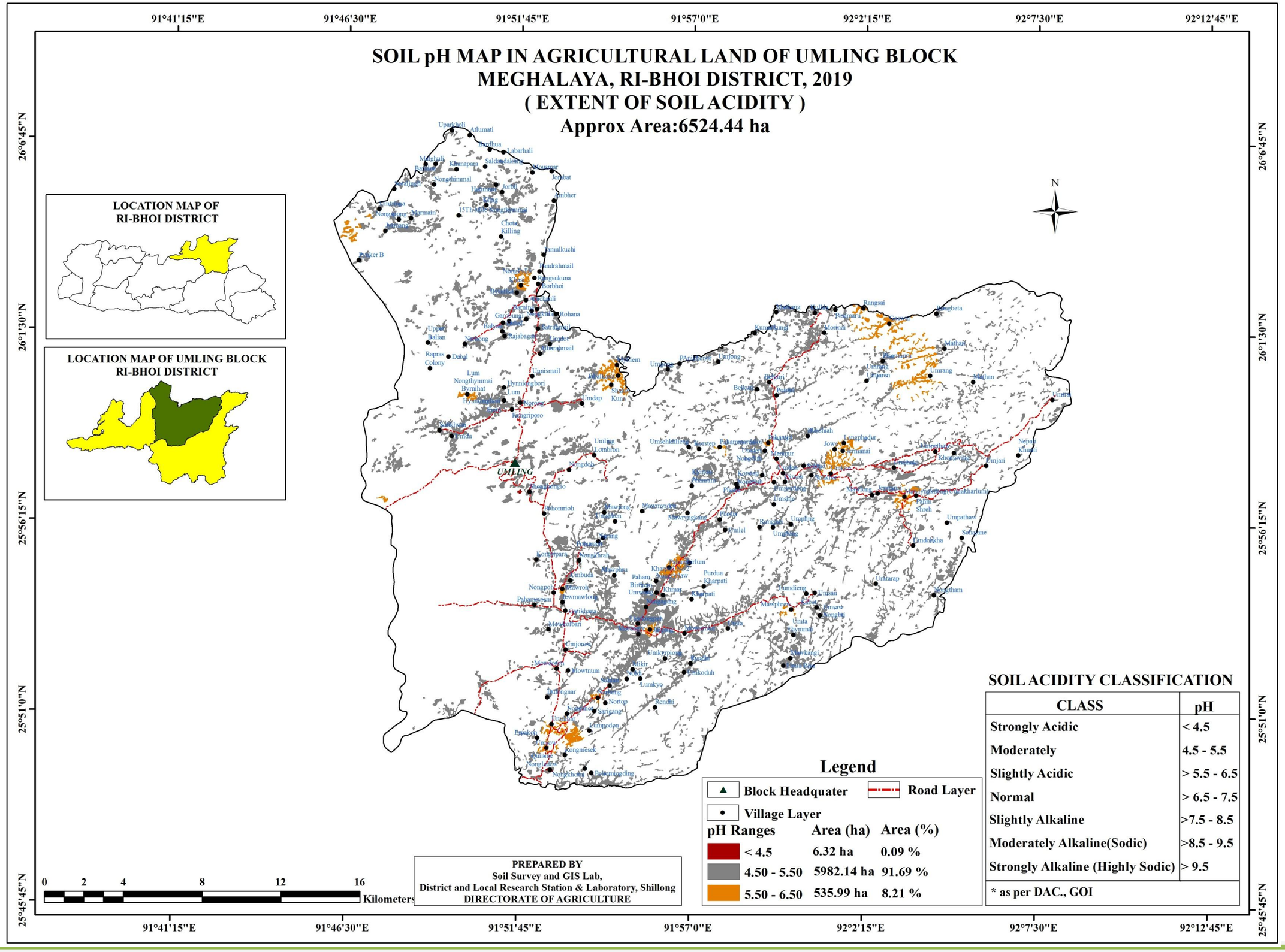

SOIL pH MAP IN AGRICULTURAL LAND OF NONGSTOIN BLOCK
MEGHALAYA, WEST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area:4594.56 ha
LOCATION MAP OF
WEST KHASI HILLS DISTRICT
LOCATION MAP OF NONGSTOIN BLOCK
WEST KHASI HILLS DISTRICT
N
NONGSTOIN
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
< 4.5 6.99 ha 0.15 %
4.50 - 5.50 3824.33 ha 83.24 %
5.50 - 6.50 763.23 ha 16.61 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 3.5 7 14 21 28
Kilome
90°48'45"E
90°54'0"E
90°59'15"E
91°4'30"E
91°9'45"E
91°15'0"E
91°20'15"E
91°25'30"E
91°30'45"E
91°36'0"E
91°41'15"E
91°46'30"E
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N
25°19'30"N

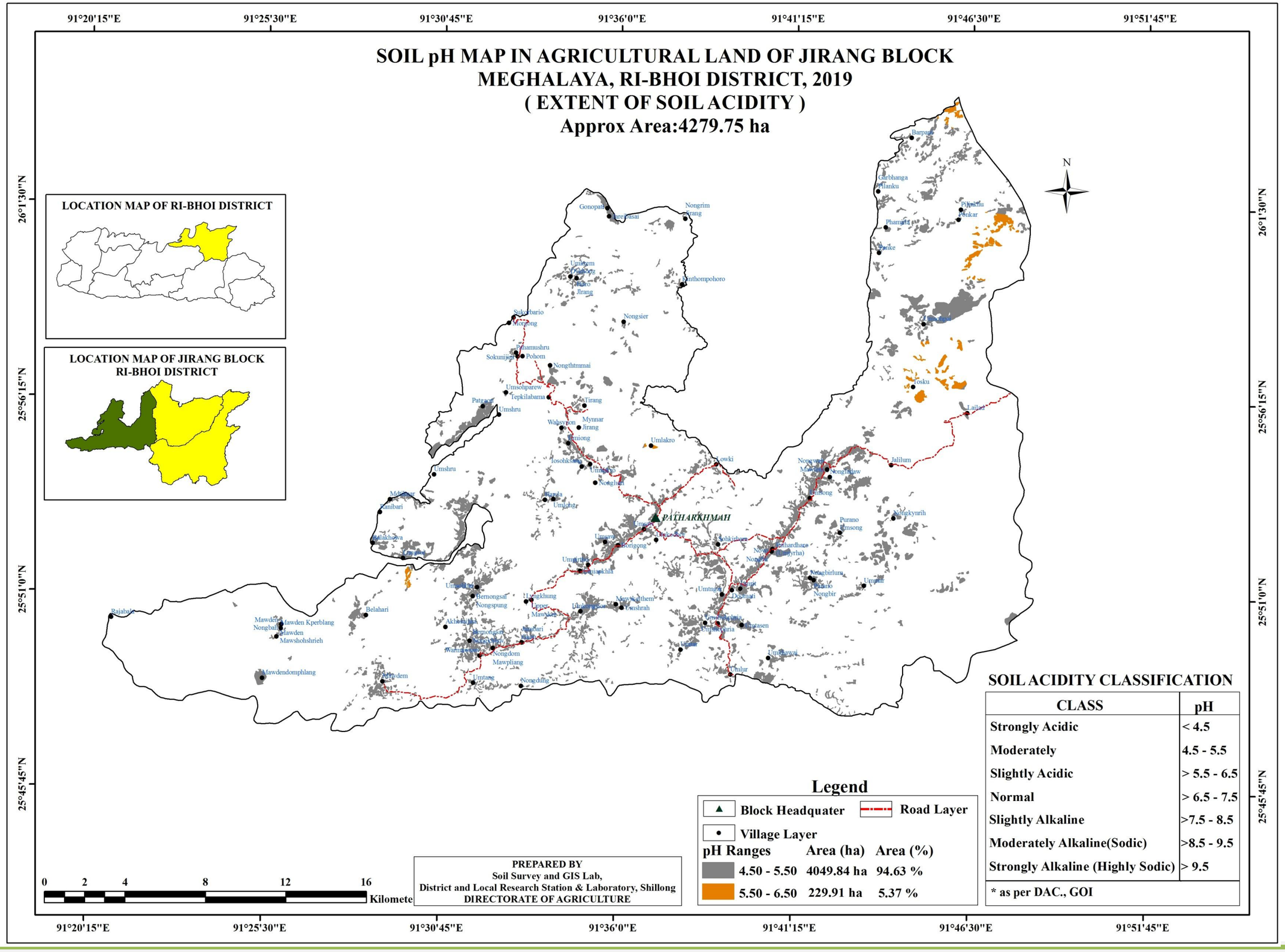

SOIL pH MAP IN AGRICULTURAL LAND OF MAWSHYNRUT BLOCK
MEGHALAYA, WEST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 6972.44 ha
LOCATION MAP OF WEST KHASI HILLS DISTRICT
LOCATION MAP OF MAWSHYNRUT BLOCK WEST KHASI HILLS DISTRICT
RIANGDO
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
4.50 - 5.50 | 5983.35 ha | 85.81 %
5.50 - 6.50 | 989.094 ha | 14.18 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 3.5 7 14 21 28
Kilometers
90°27'45"E
90°33'0"E
90°38'15"E
90°43'30"E
90°48'45"E
90°54'0"E
90°59'15"E
91°4'30"E
91°9'45"E
91°15'0"E
91°20'15"E
91°25'30"E
91°30'45"E
25°56'15"N
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N
25°19'30"N

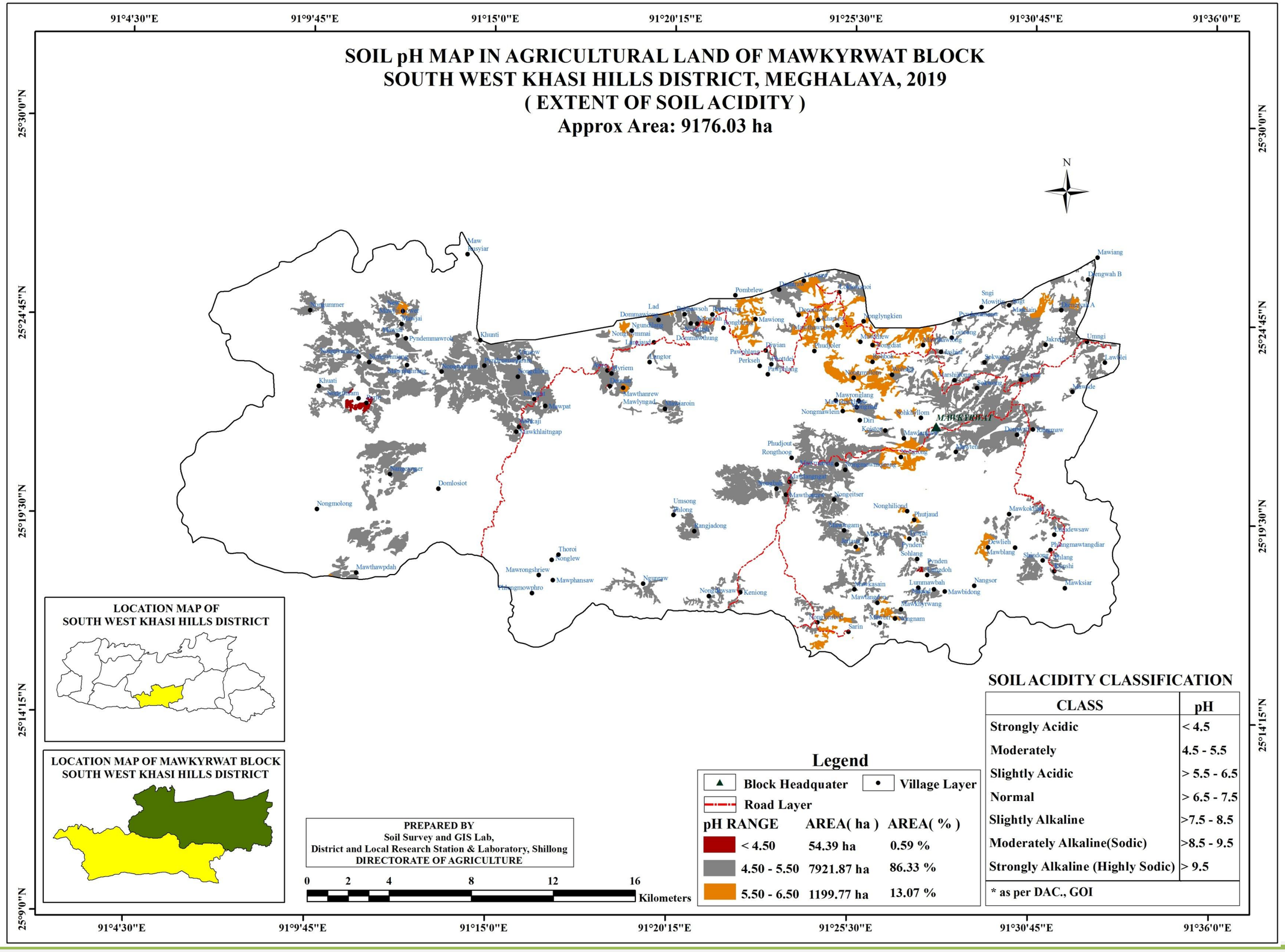

SOIL pH MAP IN AGRICULTURAL LAND OF MAWTHADRASHAN BLOCK
MEGHALAYA, WEST KHASI HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 5777.62 ha
LOCATION MAP OF
WEST KHASI HILLS DISTRICT
LOCATION MAP OF MAWTHADRASHAN BLOCK
WEST KHASI HILLS DISTRICT
N
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
< 4.50 | 3.33 ha | 0.058 %
4.50 - 5.50 | 1956.33 ha | 33.86 %
5.50 - 6.50 | 3817.96 ha | 66.08 %
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20
Kilometers
91°9'45"E
91°15'0"E
91°20'15"E
91°25'30"E
91°30'45"E
91°36'0"E
91°41'15"E
91°46'30"E
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N

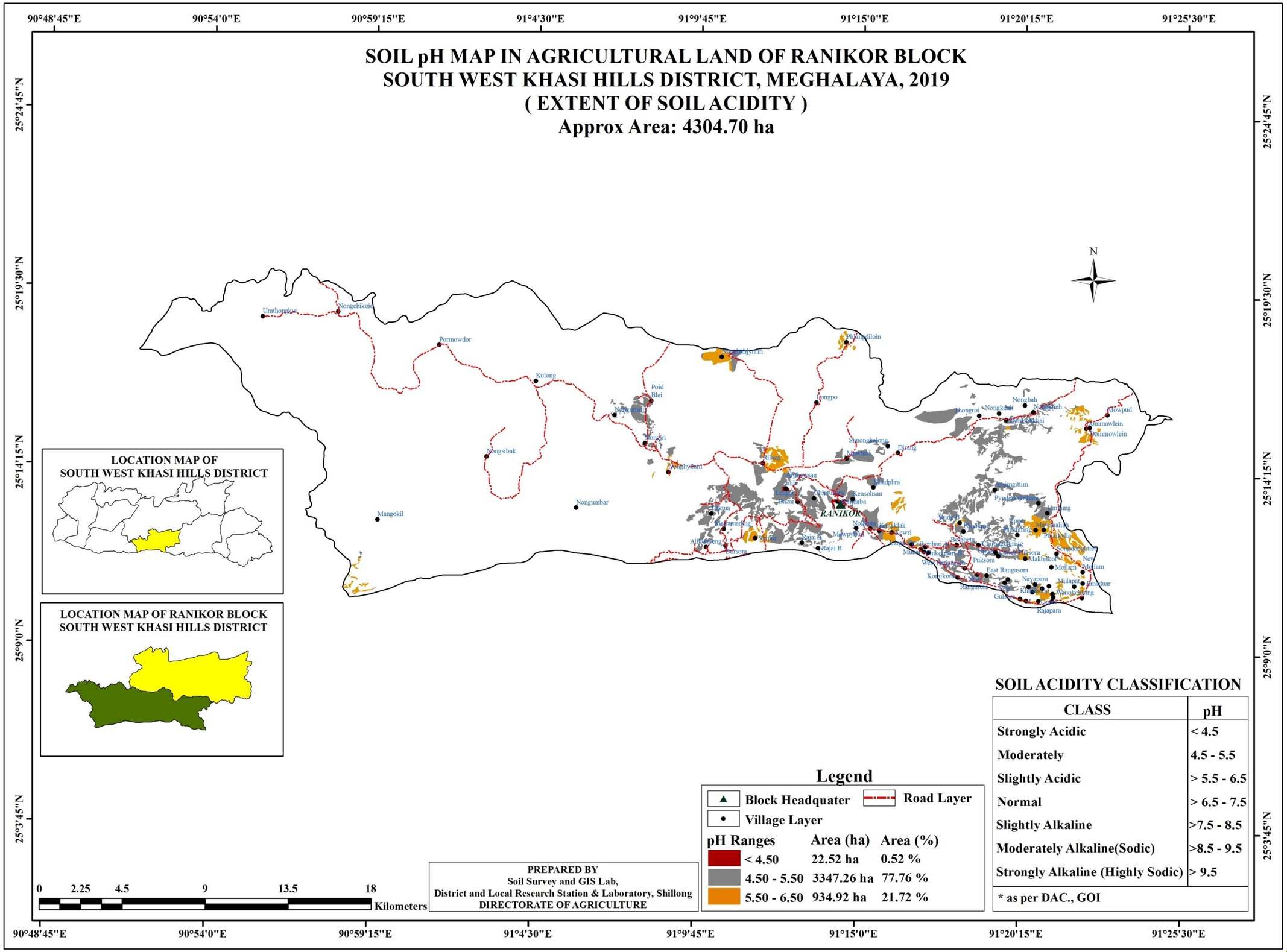

SOIL pH MAP IN AGRICULTURAL LAND OF MAIRANG BLOCK
WEST KHASI HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 6667.23 ha
LOCATION MAP OF WEST KHASI HILLS DISTRICT
LOCATION MAP OF MAIRANG BLOCK WEST KHASI HILLS DISTRICT
MAIRANG
N
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
4.50 - 5.50 4591.51 ha 68.86 %
5.50 - 6.50 2075.72 ha 31.13 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometers
91°20'15"E
91°25'30"E
91°30'45"E
91°36'0"E
91°41'15"E
91°46'30"E
91°51'45"E
91°57'0"E
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N

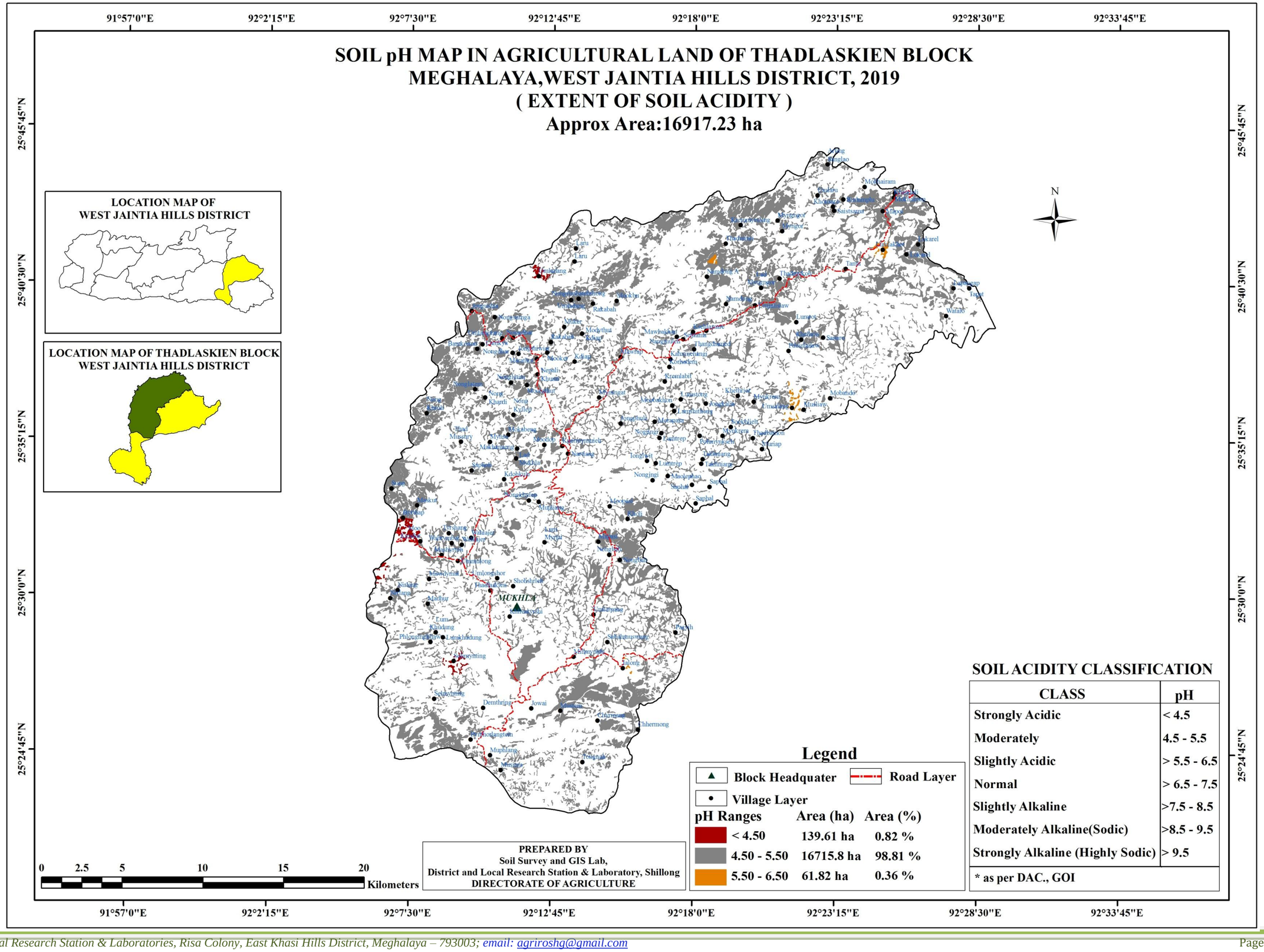

SOIL pH MAP IN AGRICULTURAL LAND OF UMSNING BLOCK
MEGHALAYA, RI-BHOI DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area:10326.70 ha
LOCATION MAP OF RI-BHOI DISTRICT
LOCATION MAP OF UMSNING BLOCK
RI-BHOI DISTRICT
N
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
< 4.5 127.12 ha 1.23 %
4.50 - 5.50 8753.60 ha 84.77 %
5.50 - 6.50 1445.98 ha 14.00 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20
Kilometers
91°41'15"E
91°46'30"E
91°51'45"E
91°57'0"E
92°2'15"E
92°7'30"E
92°12'45"E
92°18'0"E
26°1'30"N
25°56'15"N
25°51'0"N
25°45'45"N
25°40'30"N

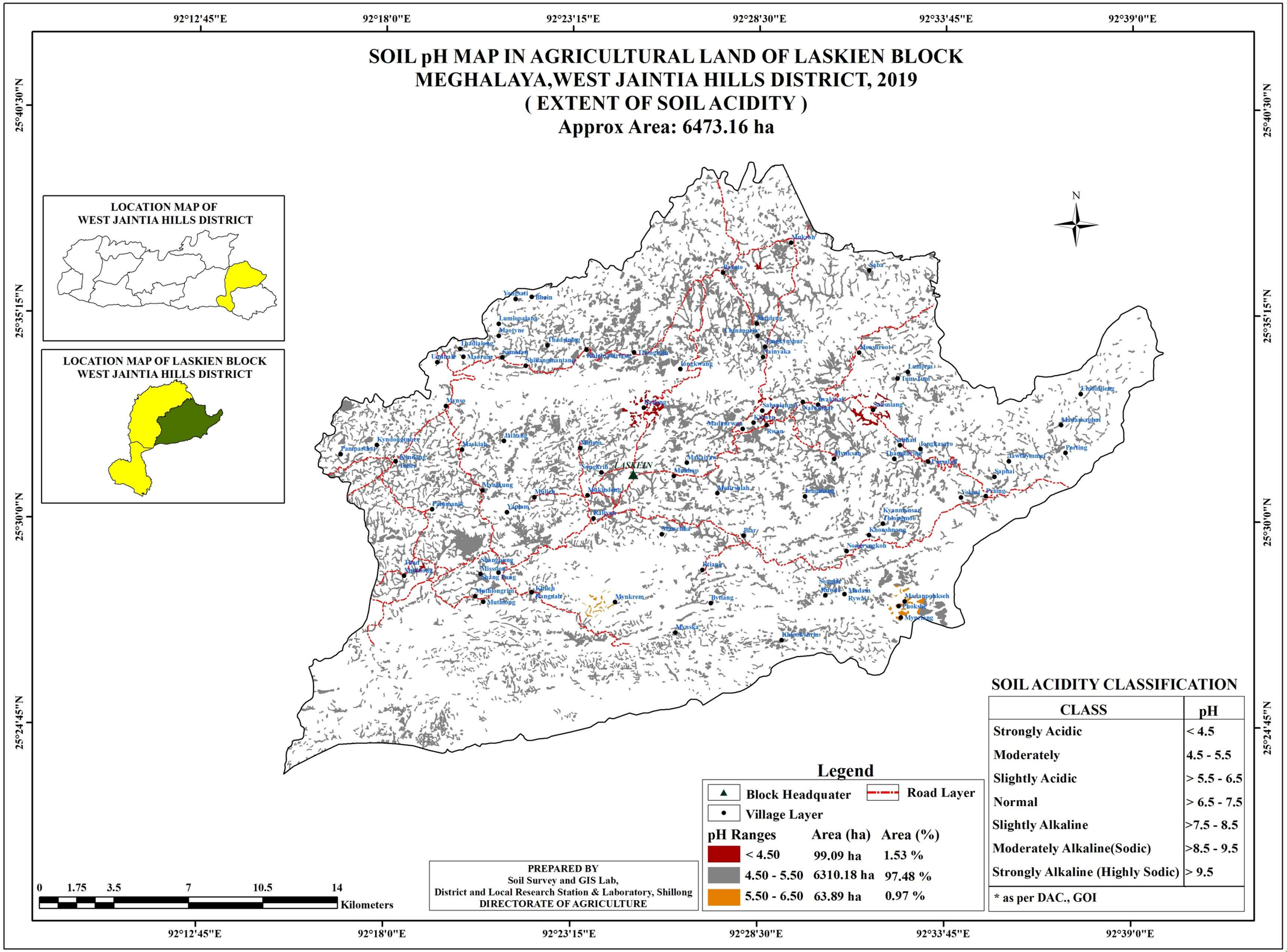

SOIL pH MAP IN AGRICULTURAL LAND OF UMLING BLOCK
MEGHALAYA, RI-BHOI DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area:6524.44 ha
LOCATION MAP OF RI-BHOI DISTRICT
LOCATION MAP OF UMLING BLOCK RI-BHOI DISTRICT
N
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
< 4.5 | 6.32 ha | 0.09 %
4.50 - 5.50 | 5982.14 ha | 91.69 %
5.50 - 6.50 | 535.99 ha | 8.21 %
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16 Kilometers
91°41'15"E
91°46'30"E
91°51'45"E
91°57'0"E
92°2'15"E
92°7'30"E
92°12'45"E
26°6'45"N
26°1'30"N
25°56'15"N
25°51'0"N
25°45'45"N

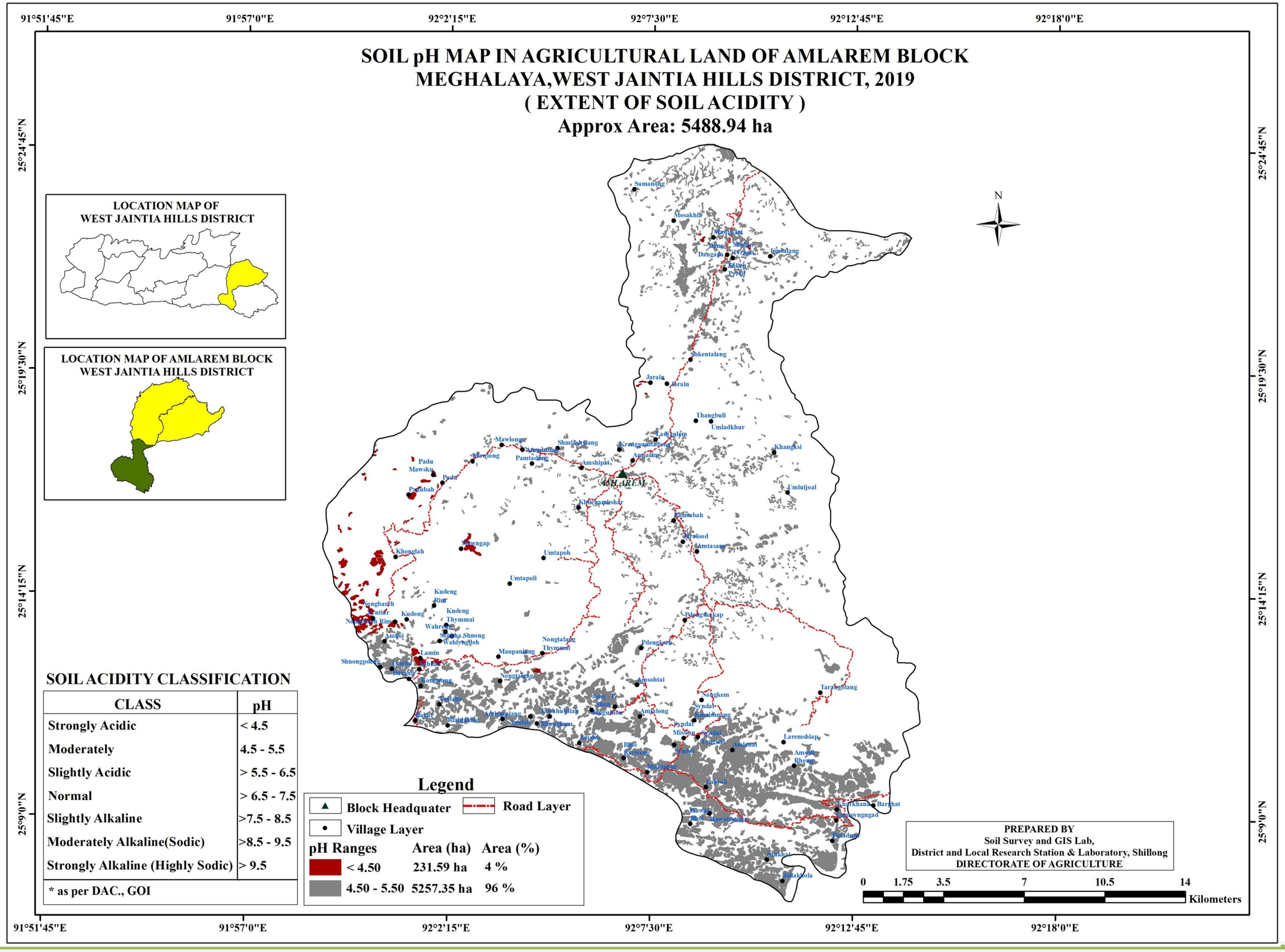

SOIL pH MAP IN AGRICULTURAL LAND OF JIRANG BLOCK
MEGHALAYA, RI-BHOI DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area:4279.75 ha
LOCATION MAP OF RI-BHOI DISTRICT
LOCATION MAP OF JIRANG BLOCK
RI-BHOI DISTRICT
91°20'15"E
91°25'30"E
91°30'45"E
91°36'0"E
91°41'15"E
91°46'30"E
91°51'45"E
26°1'30"N
25°56'15"N
25°51'0"N
25°45'45"N
N
PATHARKHMAH
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
4.50 - 5.50 4049.84 ha 94.63 %
5.50 - 6.50 229.91 ha 5.37 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometer

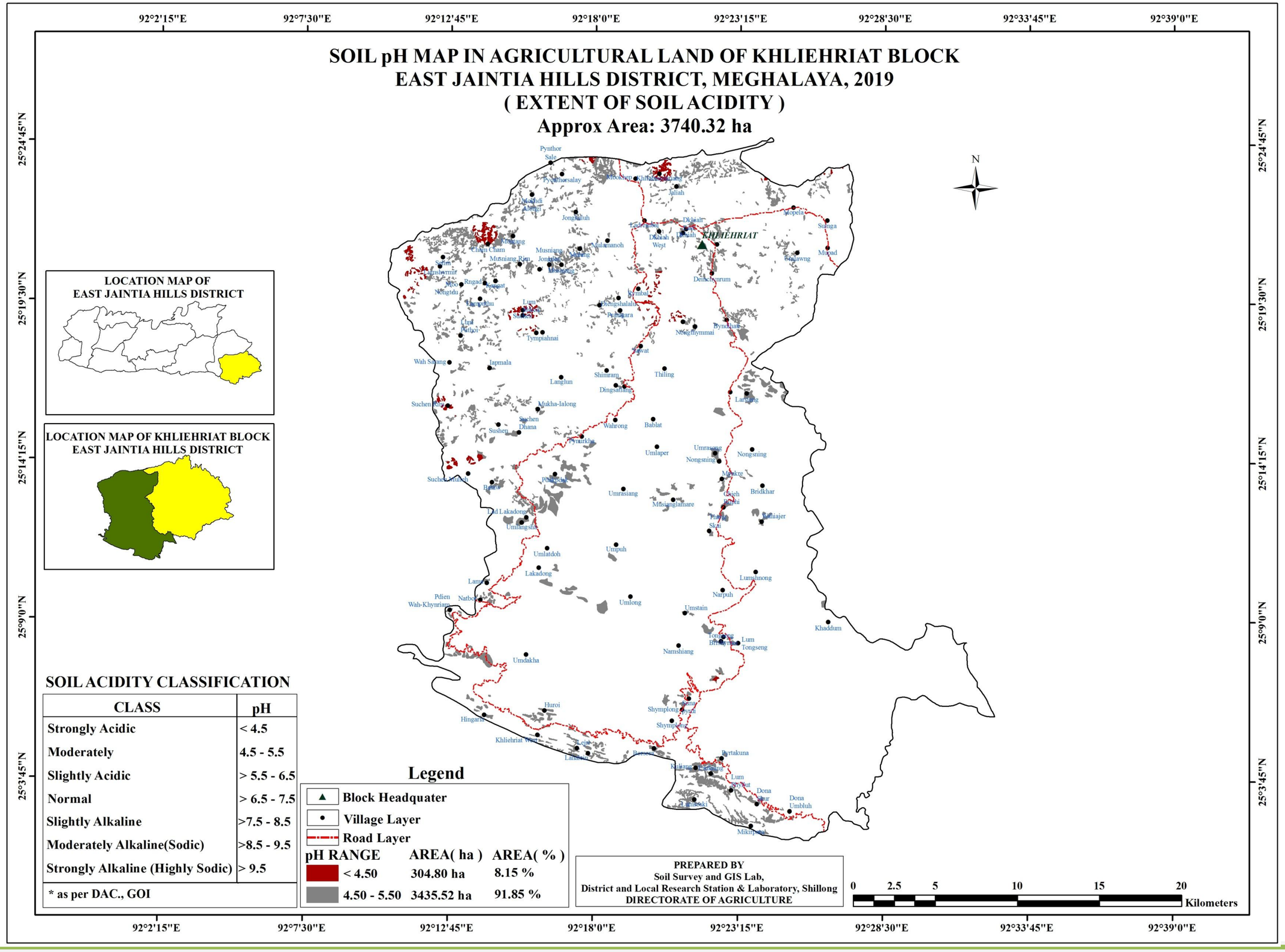

SOIL pH MAP IN AGRICULTURAL LAND OF MAWKYRWAT BLOCK
SOUTH WEST KHASI HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 9176.03 ha
91°4'30"E
91°9'45"E
91°15'0"E
91°20'15"E
91°25'30"E
91°30'45"E
91°36'0"E
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
N
MAWKYRWAT
LOCATION MAP OF
SOUTH WEST KHASI HILLS DISTRICT
LOCATION MAP OF MAWKYRWAT BLOCK
SOUTH WEST KHASI HILLS DISTRICT
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometers
Legend
Block Headquater
Village Layer
Road Layer
pH RANGE AREA(ha) AREA(%)
< 4.50 54.39 ha 0.59 %
4.50 - 5.50 7921.87 ha 86.33 %
5.50 - 6.50 1199.77 ha 13.07 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI

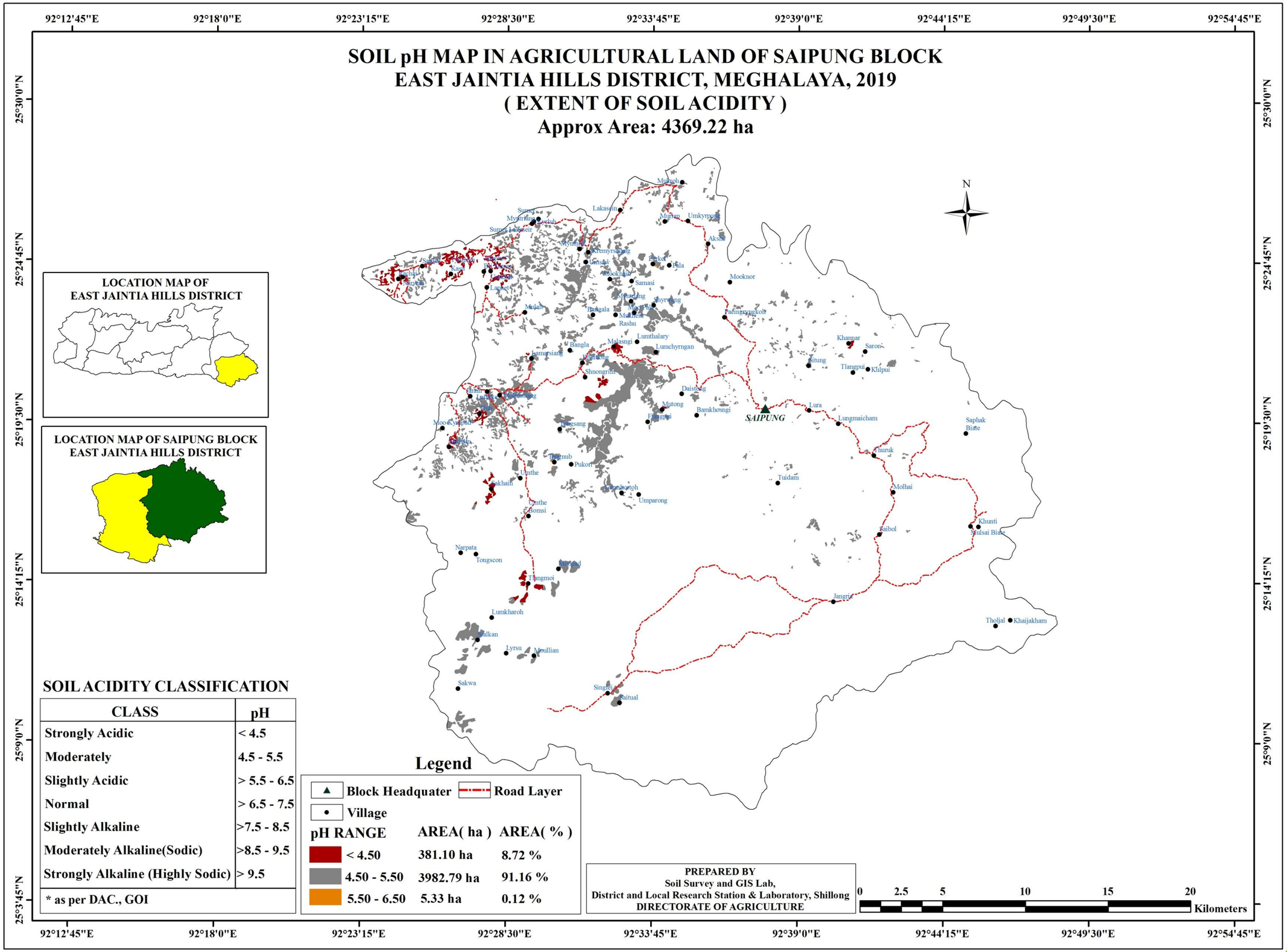

SOIL pH MAP IN AGRICULTURAL LAND OF RANIKOR BLOCK
SOUTH WEST KHASI HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 4304.70 ha
90°48'45"E
90°54'0"E
90°59'15"E
91°4'30"E
91°9'45"E
91°15'0"E
91°20'15"E
91°25'30"E
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
25°3'45"N
N
LOCATION MAP OF
SOUTH WEST KHASI HILLS DISTRICT
LOCATION MAP OF RANIKOR BLOCK
SOUTH WEST KHASI HILLS DISTRICT
Umthongkut
Nongchikoi
Pormowdor
Kulong
Poid
Blei
Nongsibak
Mangokil
Nongumbar
Nongbilang
Ranikor
Kensohisan
Jongpo
Nongbah
Nongkhah
Nongkhai
Nongroi
Mowpud
Ommawlein
Dimsang
Puksora
East Rangasora
Navapara
Rajapara
Moilam
Mulapat
Warolkhring
Gutsora
Rajai B
Shnongkolong
Djiang
Kewri
Mawpyrkhat
Shnongpdeng
Ajikdoreng
Ribhoi
Mawsan
Mawphra
Mawkhar
Bazar
Sohbar
Nongmynsong
Phyllidiloin
Nongkhyrim
Nongmynsong
Nongkhlieh
Nongkhai
Nongmynsong
Nongmynsong
Nongmynsong

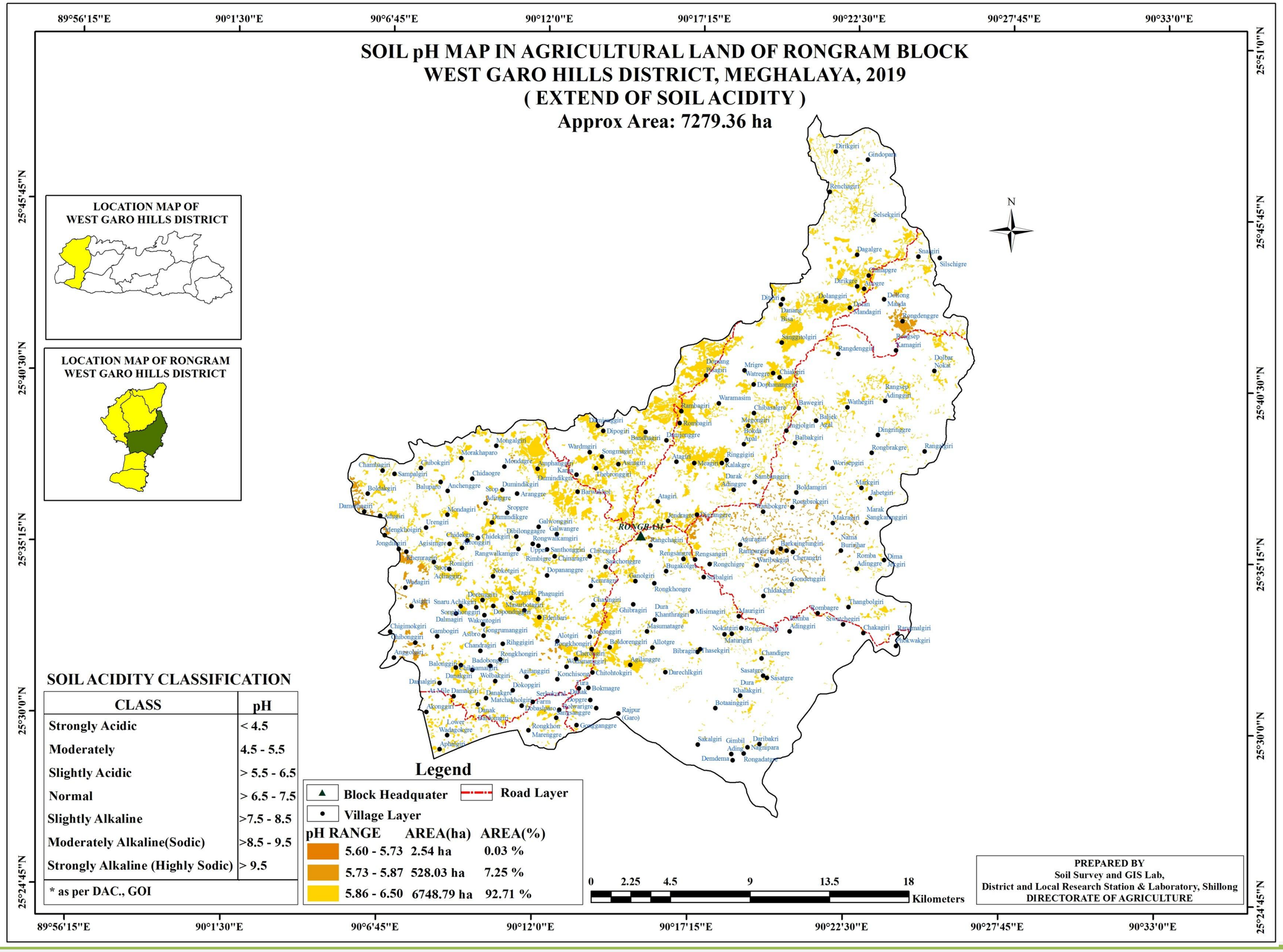

SOIL pH MAP IN AGRICULTURAL LAND OF THADLASKIEN BLOCK
MEGHALAYA,WEST JAINTIA HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area:16917.23 ha
LOCATION MAP OF WEST JAINTIA HILLS DISTRICT
LOCATION MAP OF THADLASKIEN BLOCK WEST JAINTIA HILLS DISTRICT
91°57'0"E
92°2'15"E
92°7'30"E
92°12'45"E
92°18'0"E
92°23'15"E
92°28'30"E
92°33'45"E
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N
N
MUKHLA
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
< 4.50 139.61 ha 0.82 %
4.50 - 5.50 16715.8 ha 98.81 %
5.50 - 6.50 61.82 ha 0.36 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20
Kilometers


SOIL pH MAP IN AGRICULTURAL LAND OF LASKIEN BLOCK
MEGHALAYA,WEST JAINTIA HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 6473.16 ha
LOCATION MAP OF WEST JAINTIA HILLS DISTRICT
LOCATION MAP OF LASKIEN BLOCK WEST JAINTIA HILLS DISTRICT
LASKIEN
N
92°12'45"E
92°18'0"E
92°23'15"E
92°28'30"E
92°33'45"E
92°39'0"E
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N
0 1.75 3.5 7 10.5 14
Kilometers
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
< 4.50 99.09 ha 1.53 %
4.50 - 5.50 6310.18 ha 97.48 %
5.50 - 6.50 63.89 ha 0.97 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI

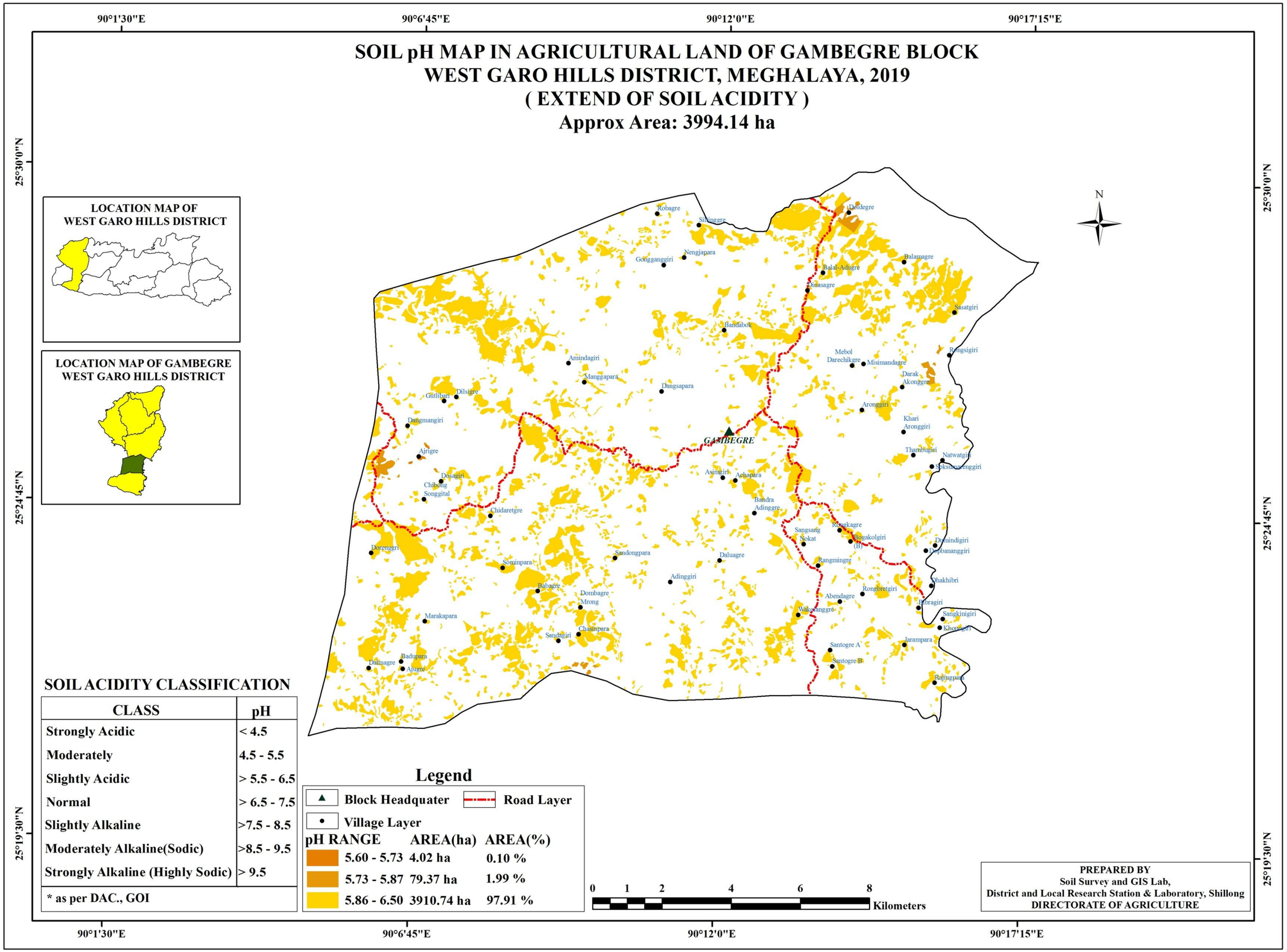

SOIL pH MAP IN AGRICULTURAL LAND OF AMLAREM BLOCK
MEGHALAYA,WEST JAINTIA HILLS DISTRICT, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 5488.94 ha
91°51'45"E
91°57'0"E
92°2'15"E
92°7'30"E
92°12'45"E
92°18'0"E
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
LOCATION MAP OF
WEST JAINTIA HILLS DISTRICT
LOCATION MAP OF AMLAREM BLOCK
WEST JAINTIA HILLS DISTRICT
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
< 4.50 | 231.59 ha | 4 %
4.50 - 5.50 | 5257.35 ha | 96 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.75 3.5 7 10.5 14
Kilometers
Samanong
Mosakhia
Shkentalang
Jaraia
Thangbuli
Umladkhur
Khangksi
Mawlong
Padu
Umtapoh
Umtapoli
Nongtalang
Thymmai
Maupanlong
Amsohtai
Amsilong
Laremshiap
Barphat
Sankhat
Jaiaikola


SOIL pH MAP IN AGRICULTURAL LAND OF KHLIEHRIAT BLOCK
EAST JAINTIA HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 3740.32 ha
92°2'15"E
92°7'30"E
92°12'45"E
92°18'0"E
92°23'15"E
92°28'30"E
92°33'45"E
92°39'0"E
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
25°3'45"N
N
KHLIEHRIAT
LOCATION MAP OF
EAST JAINTIA HILLS DISTRICT
LOCATION MAP OF KHLIEHRIAT BLOCK
EAST JAINTIA HILLS DISTRICT
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Village Layer
Road Layer
pH RANGE | AREA(ha) | AREA(%)
< 4.50 | 304.80 ha | 8.15 %
4.50 - 5.50 | 3435.52 ha | 91.85 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20
Kilometers


SOIL pH MAP IN AGRICULTURAL LAND OF SAIPUNG BLOCK
EAST JAINTIA HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 4369.22 ha
LOCATION MAP OF EAST JAINTIA HILLS DISTRICT
LOCATION MAP OF SAIPUNG BLOCK EAST JAINTIA HILLS DISTRICT
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village
pH RANGE | AREA(ha) | AREA(%)
< 4.50 | 381.10 ha | 8.72 %
4.50 - 5.50 | 3982.79 ha | 91.16 %
5.50 - 6.50 | 5.33 ha | 0.12 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20 Kilometers
N
SAIPUNG
92°12'45"E
92°18'0"E
92°23'15"E
92°28'30"E
92°33'45"E
92°39'0"E
92°44'15"E
92°49'30"E
92°54'45"E
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
25°3'45"N


SOIL pH MAP IN AGRICULTURAL LAND OF RONGRAM BLOCK
WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTEND OF SOIL ACIDITY)
Approx Area: 7279.36 ha
LOCATION MAP OF WEST GARO HILLS DISTRICT
LOCATION MAP OF RONGRAM WEST GARO HILLS DISTRICT
RONGRAM
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.60 - 5.73 2.54 ha 0.03 %
5.73 - 5.87 528.03 ha 7.25 %
5.86 - 6.50 6748.79 ha 92.71 %
0 2.25 4.5 9 13.5 18
Kilometers
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
89°56'15"E
90°1'30"E
90°6'45"E
90°12'0"E
90°17'15"E
90°22'30"E
90°27'45"E
90°33'0"E
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N

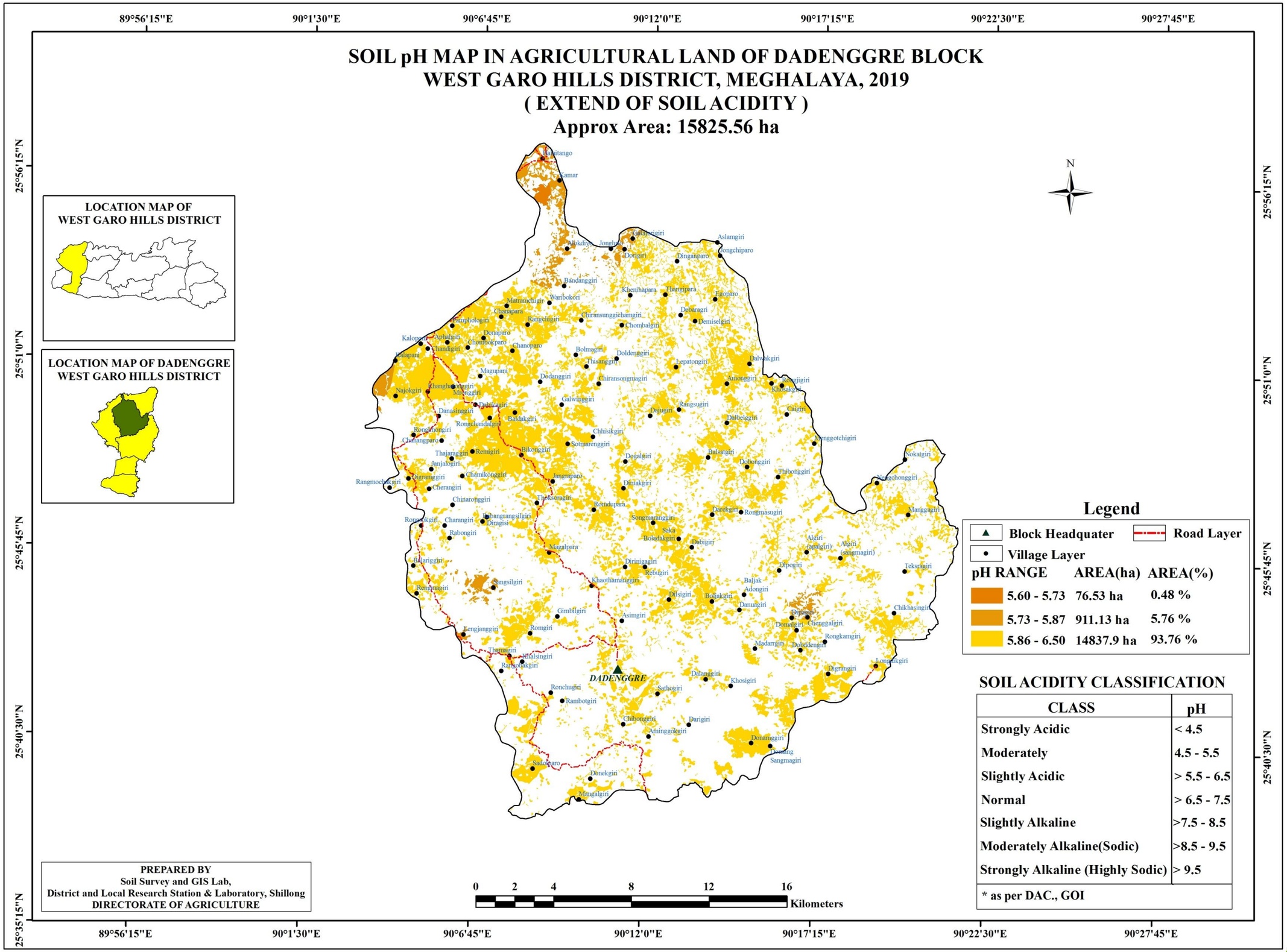
SOIL pH MAP IN AGRICULTURAL LAND OF GAMBEGRE BLOCK
WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTEND OF SOIL ACIDITY)
Approx Area: 3994.14 ha

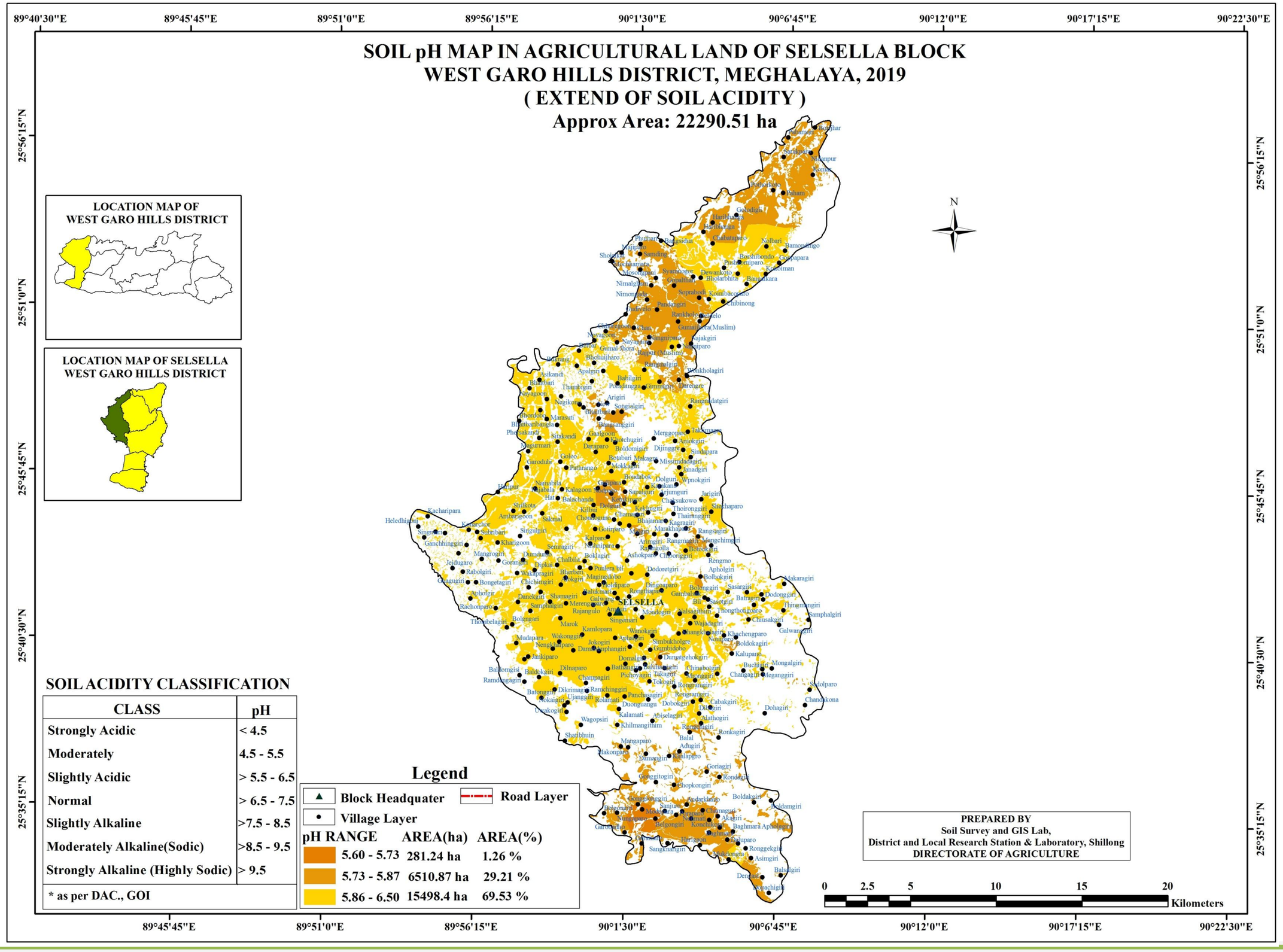


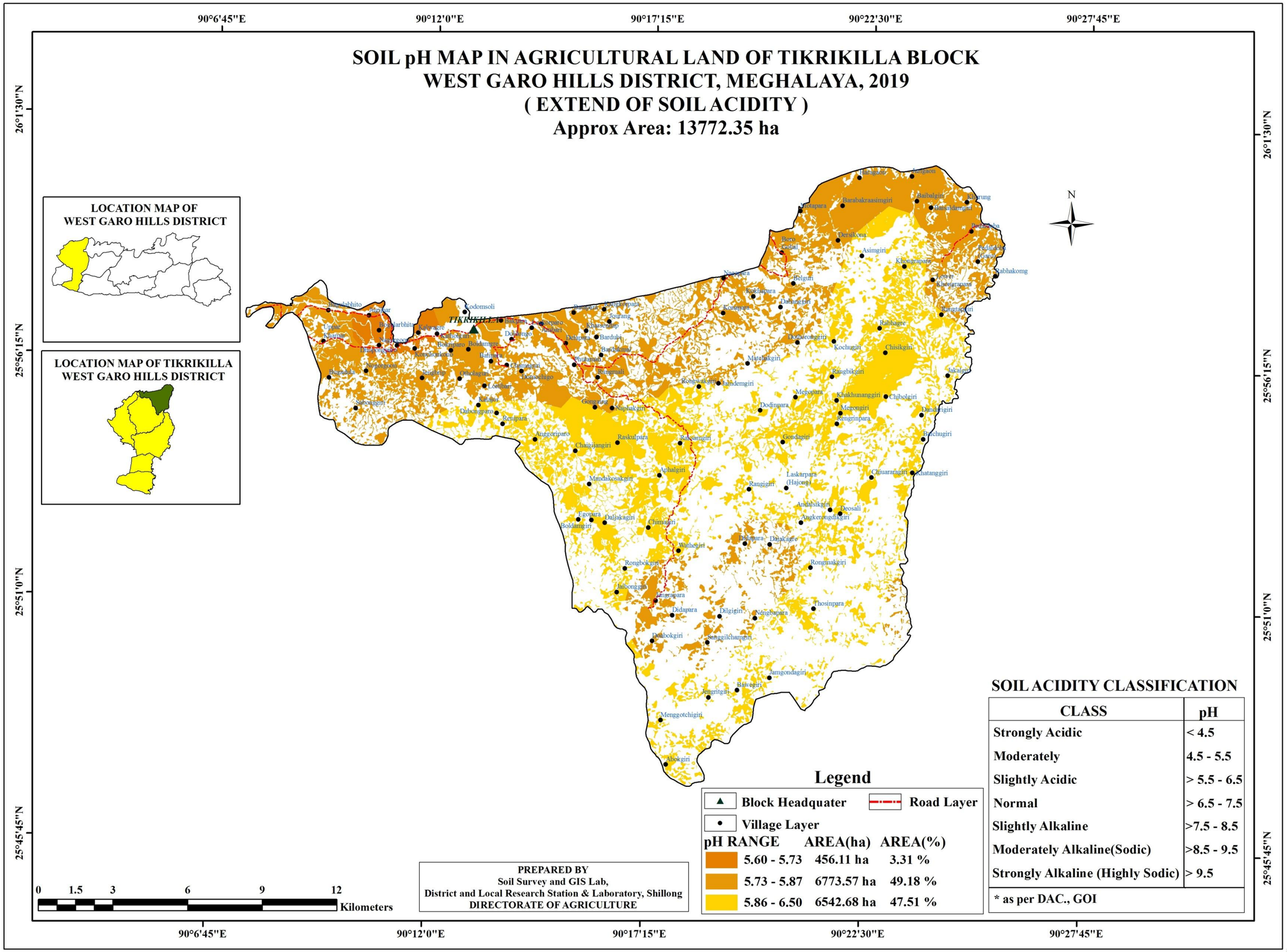
SOIL ACIDITY CLASSIFICATION

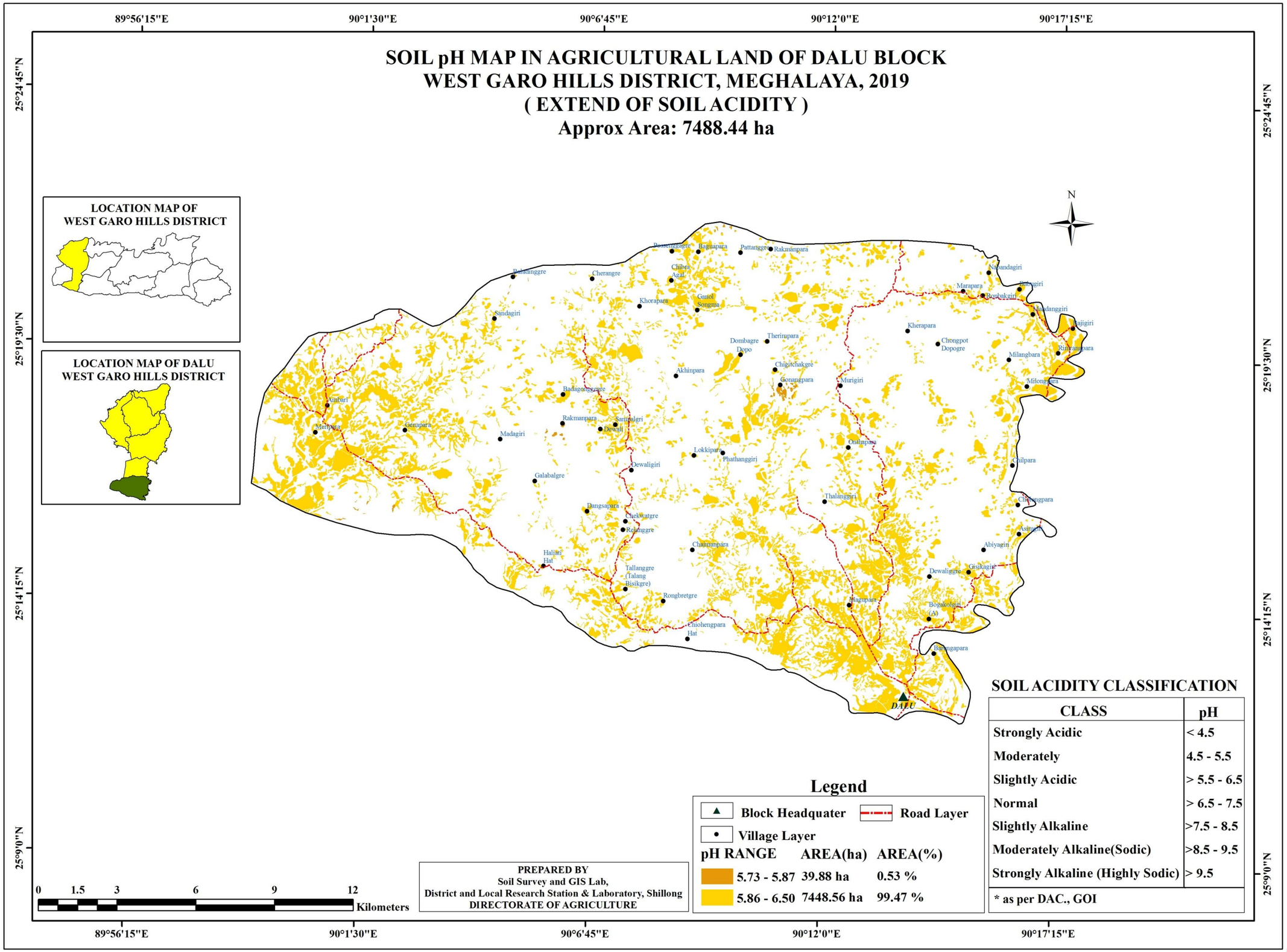
CLASS	pH
Strongly Acidic	< 4.5
Moderately	4.5 - 5.5
Slightly Acidic	> 5.5 - 6.5
Normal	> 6.5 - 7.5
Slightly Alkaline	>7.5 - 8.5
Moderately Alkaline(Sodic)	>8.5 - 9.5
Strongly Alkaline (Highly Sodic)	> 9.5

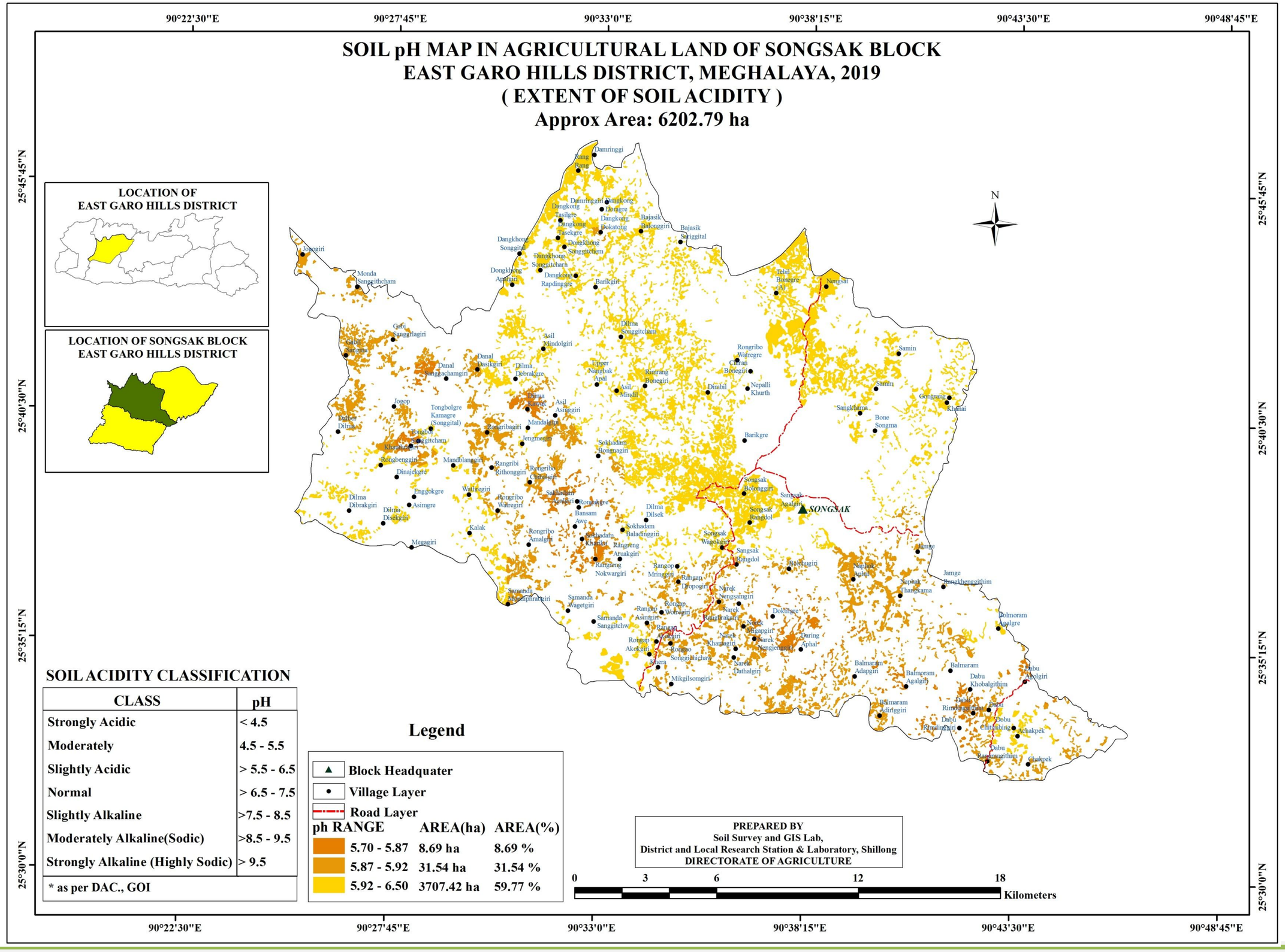
* as per DAC., GOI

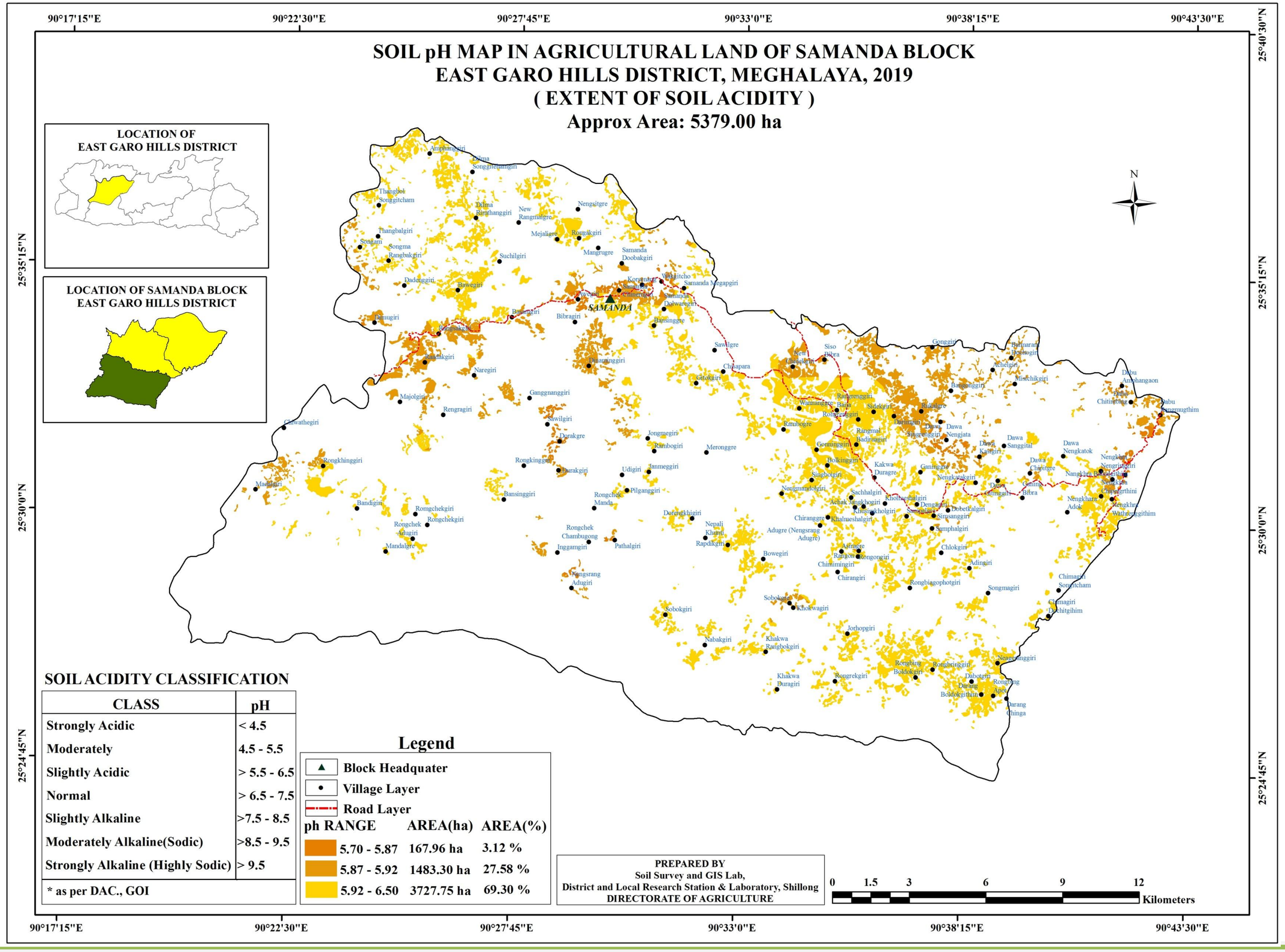

SOIL pH MAP IN AGRICULTURAL LAND OF DADENGGRE BLOCK
WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTEND OF SOIL ACIDITY)
Approx Area: 15825.56 ha
89°56'15"E
90°1'30"E
90°6'45"E
90°12'0"E
90°17'15"E
90°22'30"E
90°27'45"E
25°56'15"N
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
LOCATION MAP OF WEST GARO HILLS DISTRICT
LOCATION MAP OF DADENGGRE WEST GARO HILLS DISTRICT
N
DADENGGRE
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.60 - 5.73 76.53 ha 0.48 %
5.73 - 5.87 911.13 ha 5.76 %
5.86 - 6.50 14837.9 ha 93.76 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometers

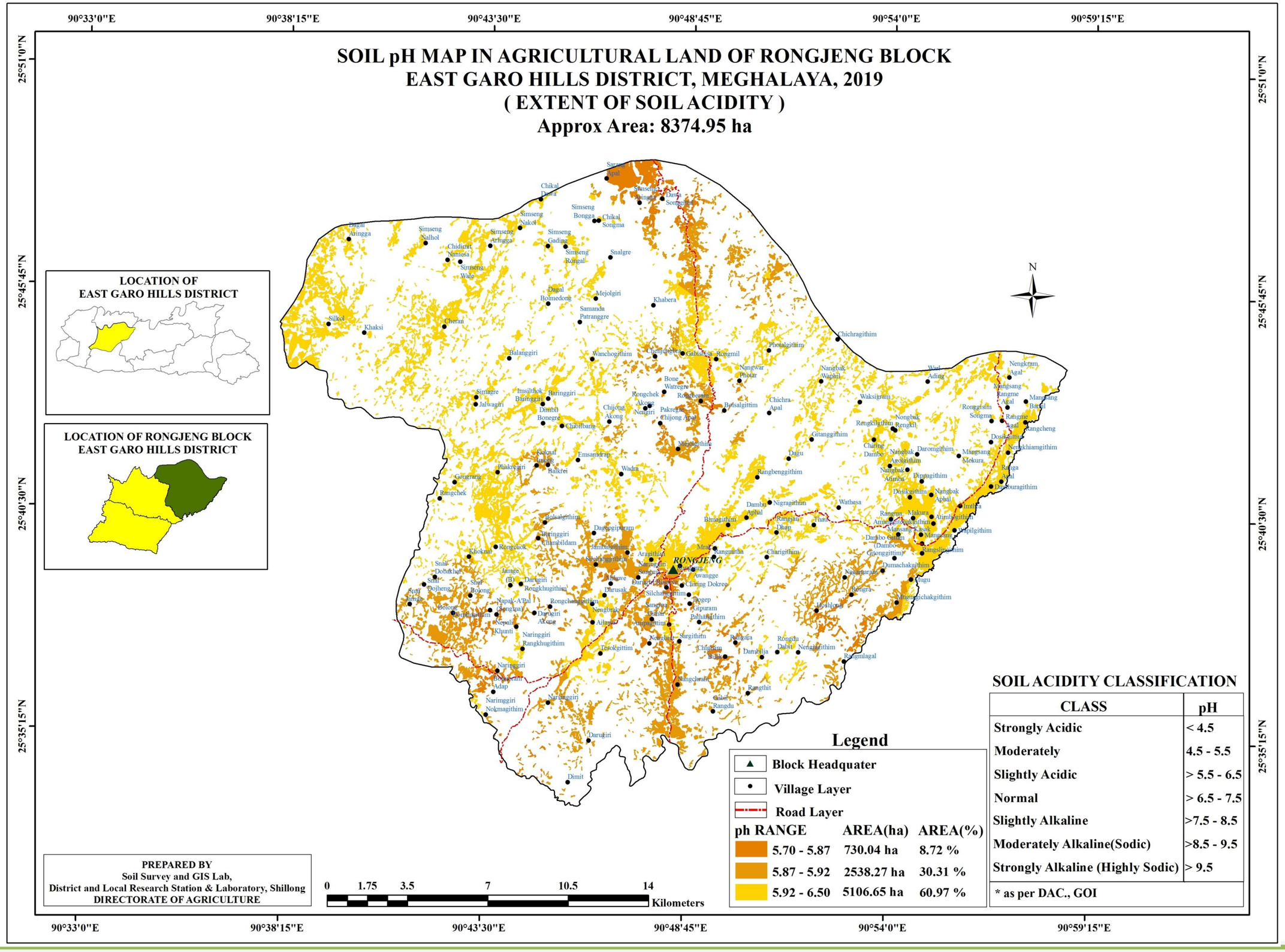

SOIL pH MAP IN AGRICULTURAL LAND OF SELSELLA BLOCK
WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTEND OF SOIL ACIDITY)
Approx Area: 22290.51 ha
LOCATION MAP OF WEST GARO HILLS DISTRICT
LOCATION MAP OF SELSELLA WEST GARO HILLS DISTRICT
SELSELLA
N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.60 - 5.73 281.24 ha 1.26 %
5.73 - 5.87 6510.87 ha 29.21 %
5.86 - 6.50 15498.4 ha 69.53 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2.5 5 10 15 20 Kilometers
89°40'30"E
89°45'45"E
89°51'0"E
89°56'15"E
90°1'30"E
90°6'45"E
90°12'0"E
90°17'15"E
90°22'30"E
25°56'15"N
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N

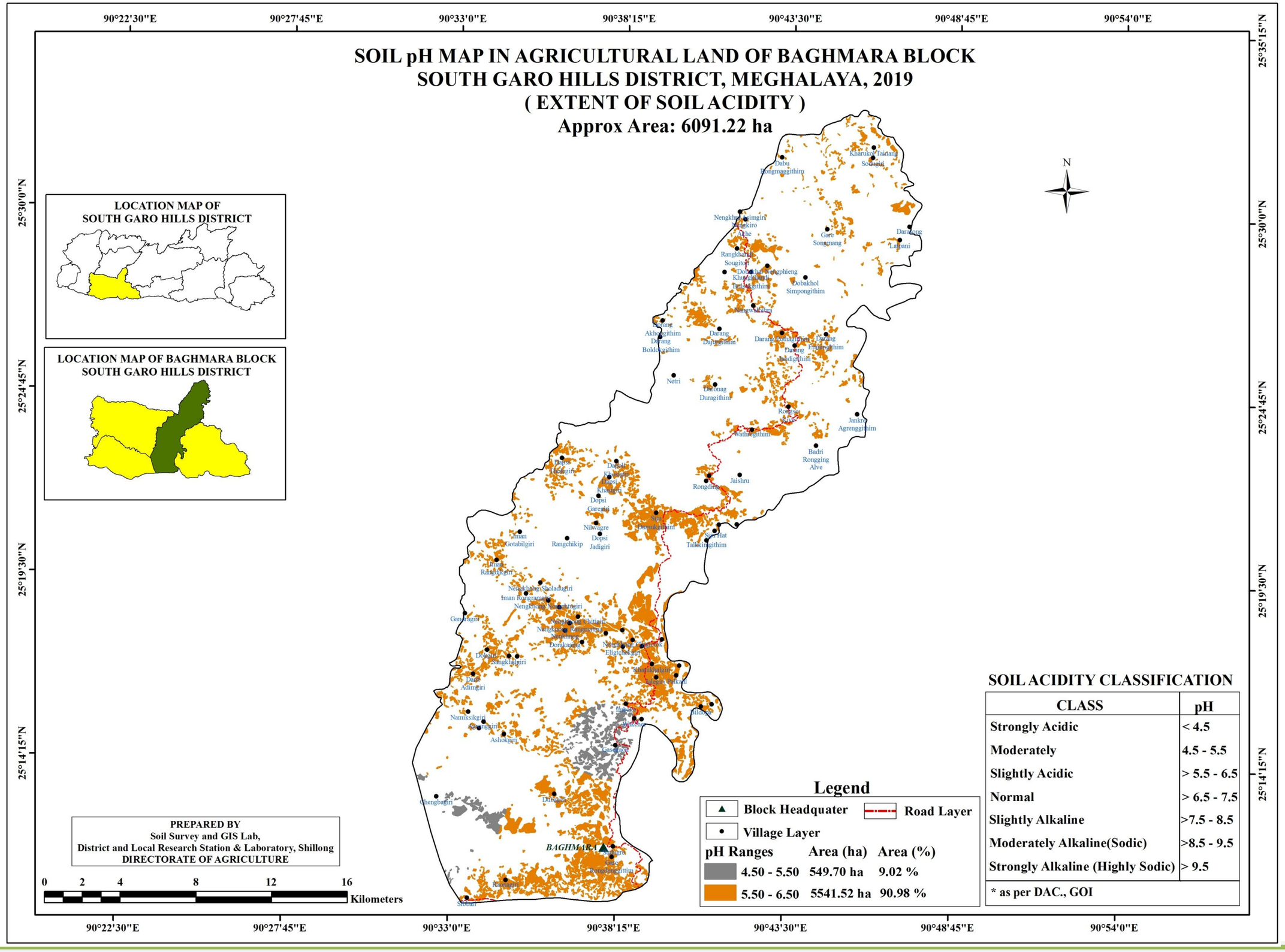

SOIL pH MAP IN AGRICULTURAL LAND OF TIKRIKILLA BLOCK
WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTEND OF SOIL ACIDITY)
Approx Area: 13772.35 ha
90°6'45"E
90°12'0"E
90°17'15"E
90°22'30"E
90°27'45"E
26°1'30"N
25°56'15"N
25°51'0"N
25°45'45"N
LOCATION MAP OF WEST GARO HILLS DISTRICT
LOCATION MAP OF TIKRIKILLA WEST GARO HILLS DISTRICT
N
TIKRIKILLA
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.60 - 5.73 456.11 ha 3.31 %
5.73 - 5.87 6773.57 ha 49.18 %
5.86 - 6.50 6542.68 ha 47.51 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.5 3 6 9 12
Kilometers

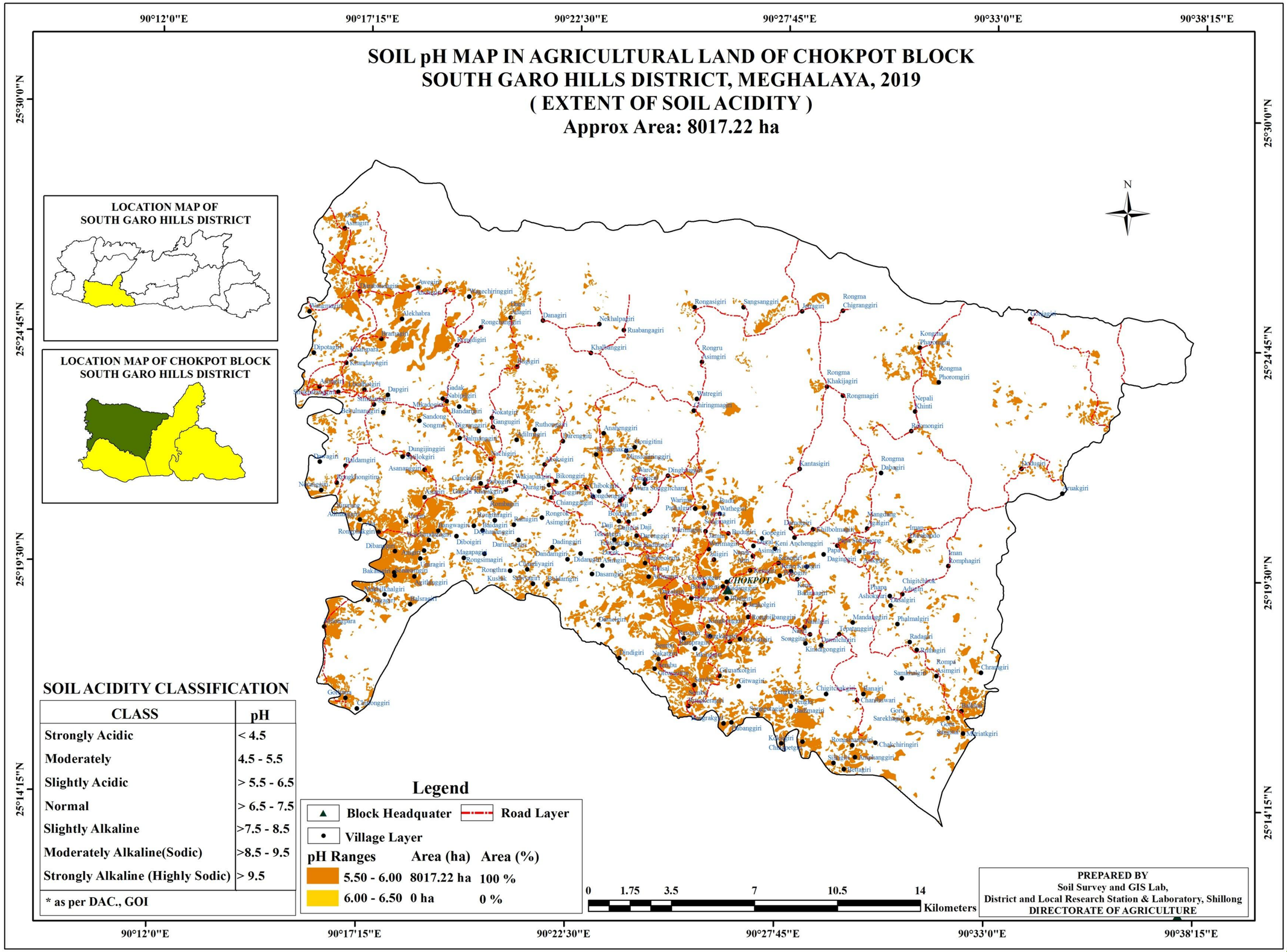

SOIL pH MAP IN AGRICULTURAL LAND OF DALU BLOCK
WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTEND OF SOIL ACIDITY)
Approx Area: 7488.44 ha
LOCATION MAP OF WEST GARO HILLS DISTRICT
LOCATION MAP OF DALU WEST GARO HILLS DISTRICT
N
89°56'15"E
90°1'30"E
90°6'45"E
90°12'0"E
90°17'15"E
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
Pattangre
Rakmanpara
Cherangre
Chibra Agal
Khorapara
Gaiol Songma
Sandagiri
Kherapara
Chongpot Dopogre
Dombagre Dopo
Therinpara
Chigitchakgre
Gonangpara
Murigiri
Milangbara
Akhinpara
Badagongsgare
Ambari
Merhpara
Genapara
Rakmanpara
Samalgiri
Dewali
Madagiri
Lokkipara
Phathanggiri
Dewaligiri
Galabalgre
Chilpara
Thalanggiri
Dangsapara
Chekwatgre
Rekinggre
Chainanpara
Abiyagin
Halijiri Hat
Tallanggre (Talang Bisikgre)
Dewaliggre
Gisikagiri
Rongbretgre
Bogakolgiri (A)
Chiohengpara Hat
Barangapara
DALU
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.73 - 5.87 39.88 ha 0.53 %
5.86 - 6.50 7448.56 ha 99.47 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.5 3 6 9 12
Kilometers

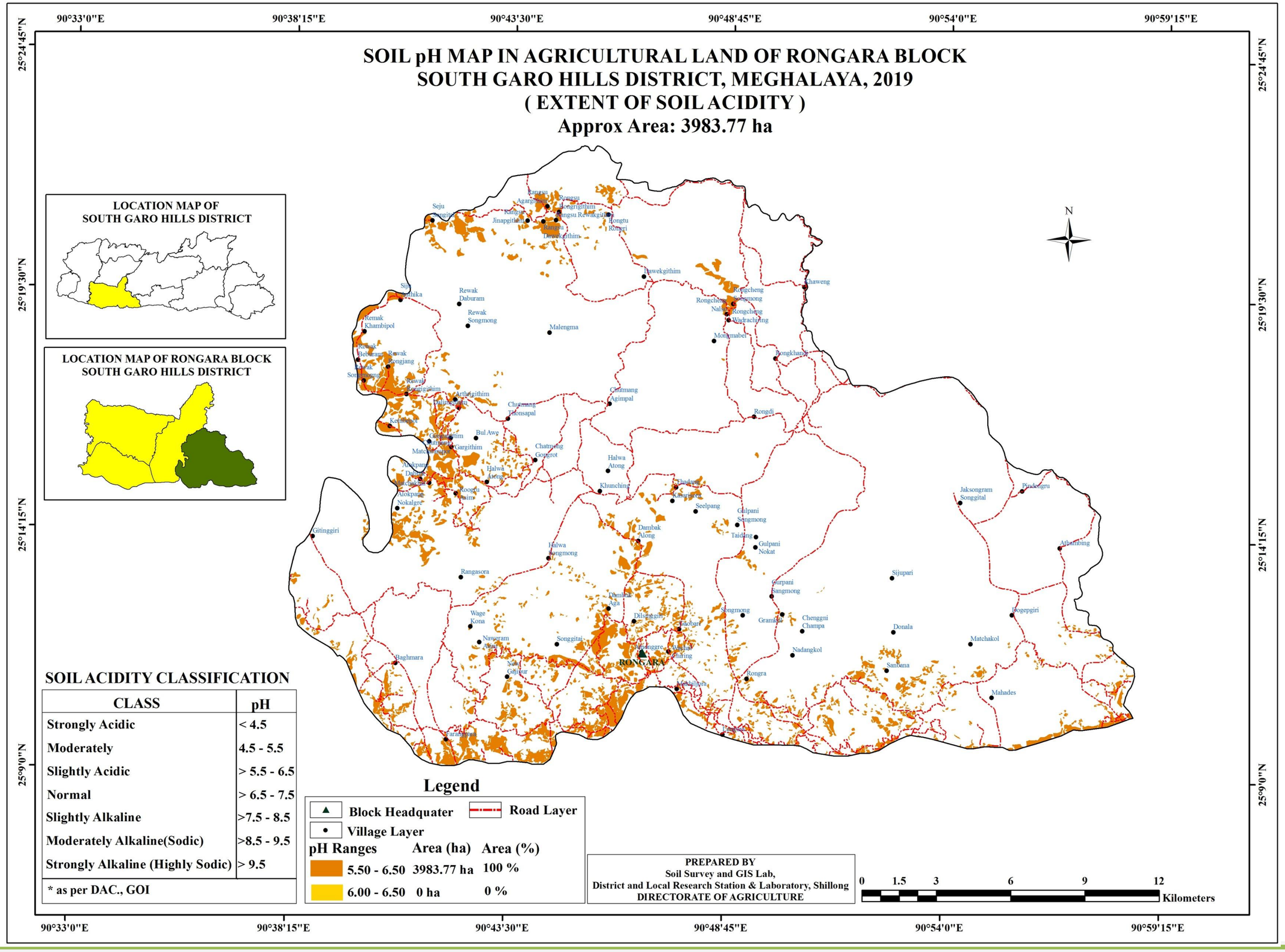

SOIL pH MAP IN AGRICULTURAL LAND OF SONGSAK BLOCK
EAST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 6202.79 ha
90°22'30"E
90°27'45"E
90°33'0"E
90°38'15"E
90°43'30"E
90°48'45"E
25°45'45"N
25°40'30"N
25°35'15"N
25°30'0"N
LOCATION OF EAST GARO HILLS DISTRICT
LOCATION OF SONGSAK BLOCK EAST GARO HILLS DISTRICT
N
SONGSAK
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Village Layer
Road Layer
ph RANGE AREA(ha) AREA(%)
5.70 - 5.87 8.69 ha 8.69 %
5.87 - 5.92 31.54 ha 31.54 %
5.92 - 6.50 3707.42 ha 59.77 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 3 6 12 18
Kilometers

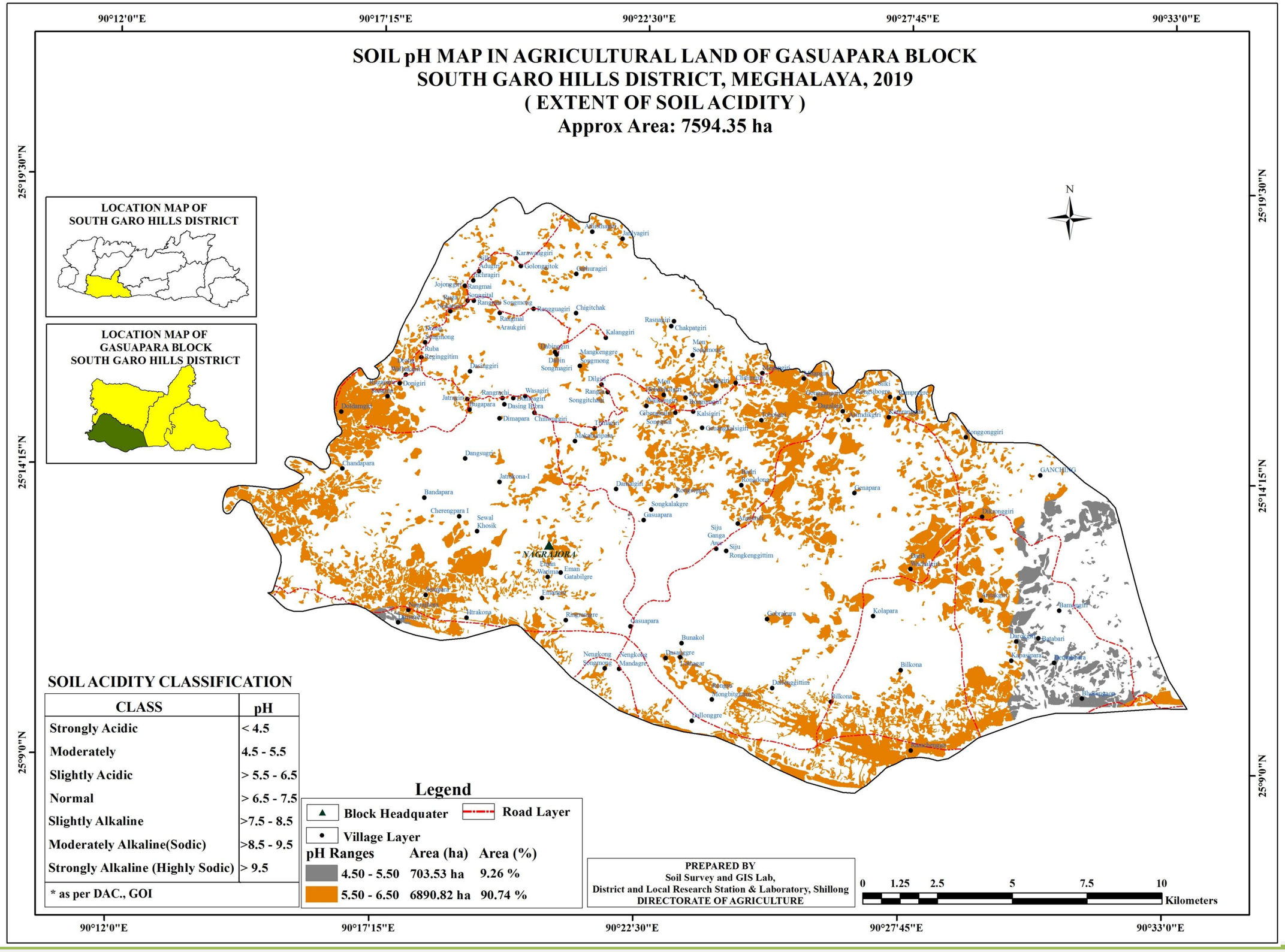

SOIL pH MAP IN AGRICULTURAL LAND OF SAMANDA BLOCK
EAST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 5379.00 ha
LOCATION OF EAST GARO HILLS DISTRICT
LOCATION OF SAMANDA BLOCK EAST GARO HILLS DISTRICT
SAMANDA
N
90°17'15"E
90°22'30"E
90°27'45"E
90°33'0"E
90°38'15"E
90°43'30"E
25°40'30"N
25°35'15"N
25°30'0"N
25°24'45"N
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Village Layer
Road Layer
ph RANGE AREA(ha) AREA(%)
5.70 - 5.87 167.96 ha 3.12 %
5.87 - 5.92 1483.30 ha 27.58 %
5.92 - 6.50 3727.75 ha 69.30 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.5 3 6 9 12
Kilometers

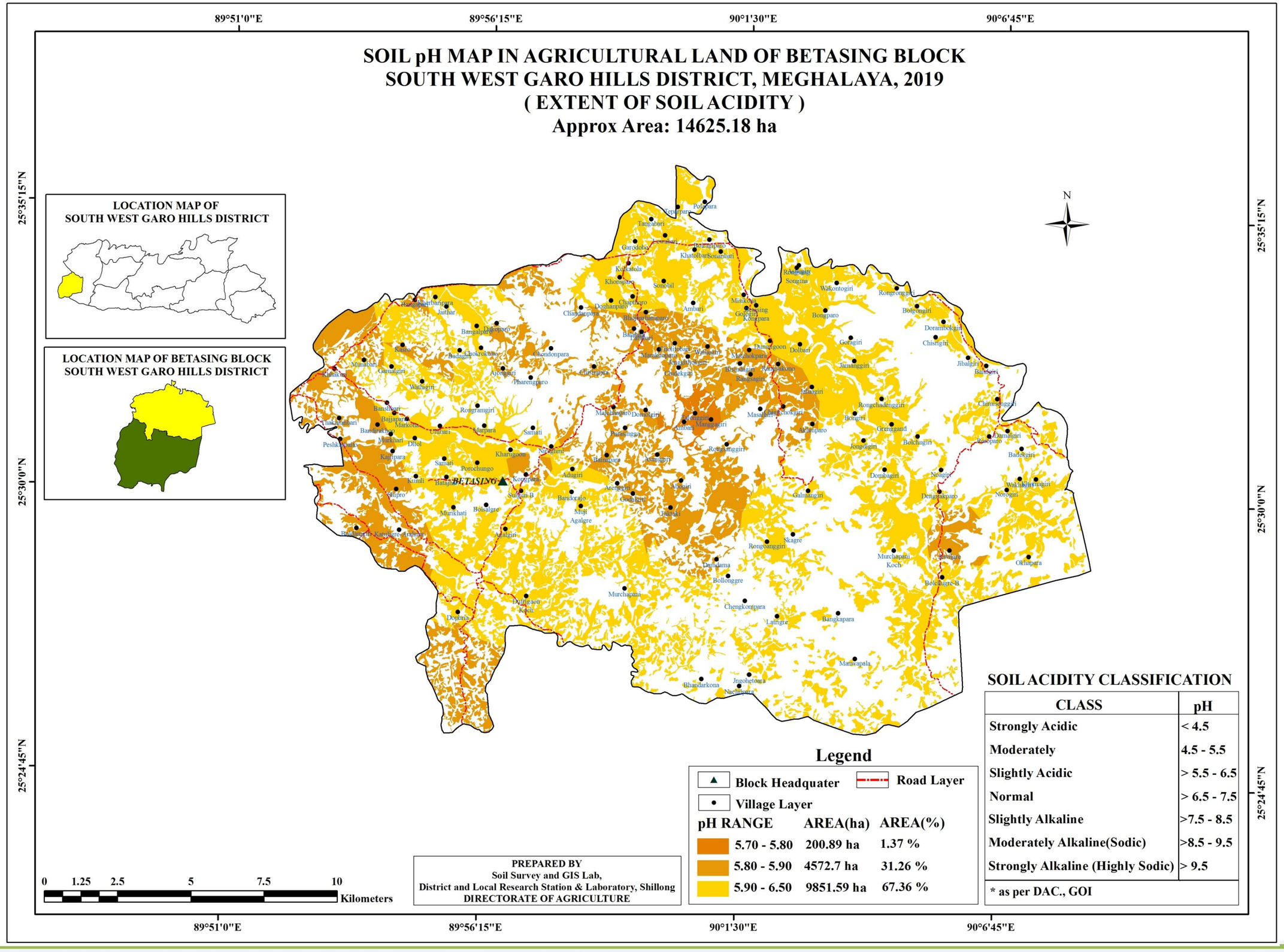

SOIL pH MAP IN AGRICULTURAL LAND OF RONGJENG BLOCK
EAST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 8374.95 ha
90°33'0"E
90°38'15"E
90°43'30"E
90°48'45"E
90°54'0"E
90°59'15"E
25°51'0"N
25°45'45"N
25°40'30"N
25°35'15"N
LOCATION OF EAST GARO HILLS DISTRICT
LOCATION OF RONGJENG BLOCK EAST GARO HILLS DISTRICT
RONGJENG
N
Legend
Block Headquater
Village Layer
Road Layer
ph RANGE AREA(ha) AREA(%)
5.70 - 5.87 730.04 ha 8.72 %
5.87 - 5.92 2538.27 ha 30.31 %
5.92 - 6.50 5106.65 ha 60.97 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.75 3.5 7 10.5 14
Kilometers

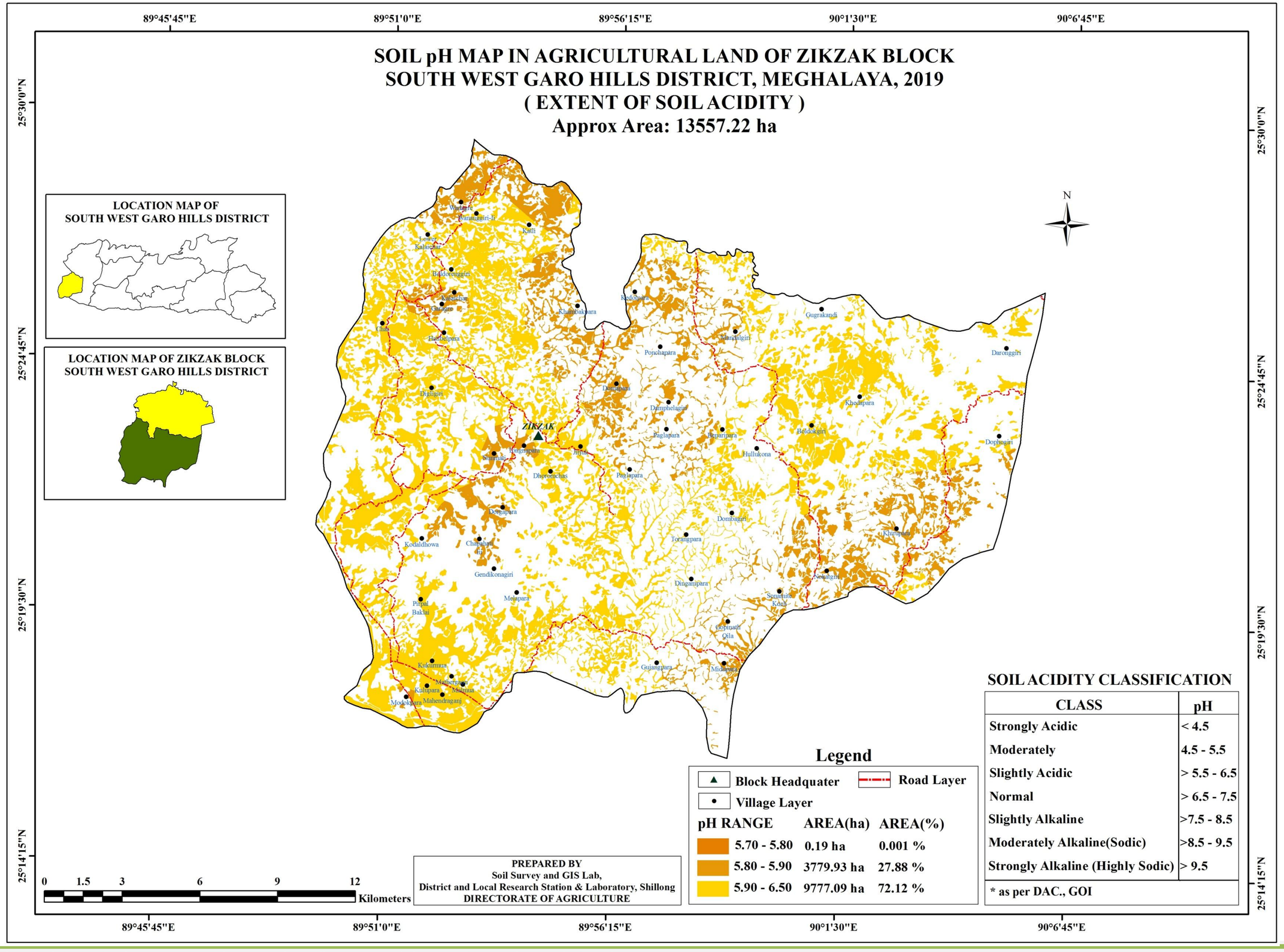

SOIL pH MAP IN AGRICULTURAL LAND OF BAGHMARA BLOCK
SOUTH GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 6091.22 ha
LOCATION MAP OF SOUTH GARO HILLS DISTRICT
LOCATION MAP OF BAGHMARA BLOCK SOUTH GARO HILLS DISTRICT
N
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges Area (ha) Area (%)
4.50 - 5.50 549.70 ha 9.02 %
5.50 - 6.50 5541.52 ha 90.98 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometers
BAGHMARA
90°22'30"E
90°27'45"E
90°33'0"E
90°38'15"E
90°43'30"E
90°48'45"E
90°54'0"E
25°35'15"N
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N

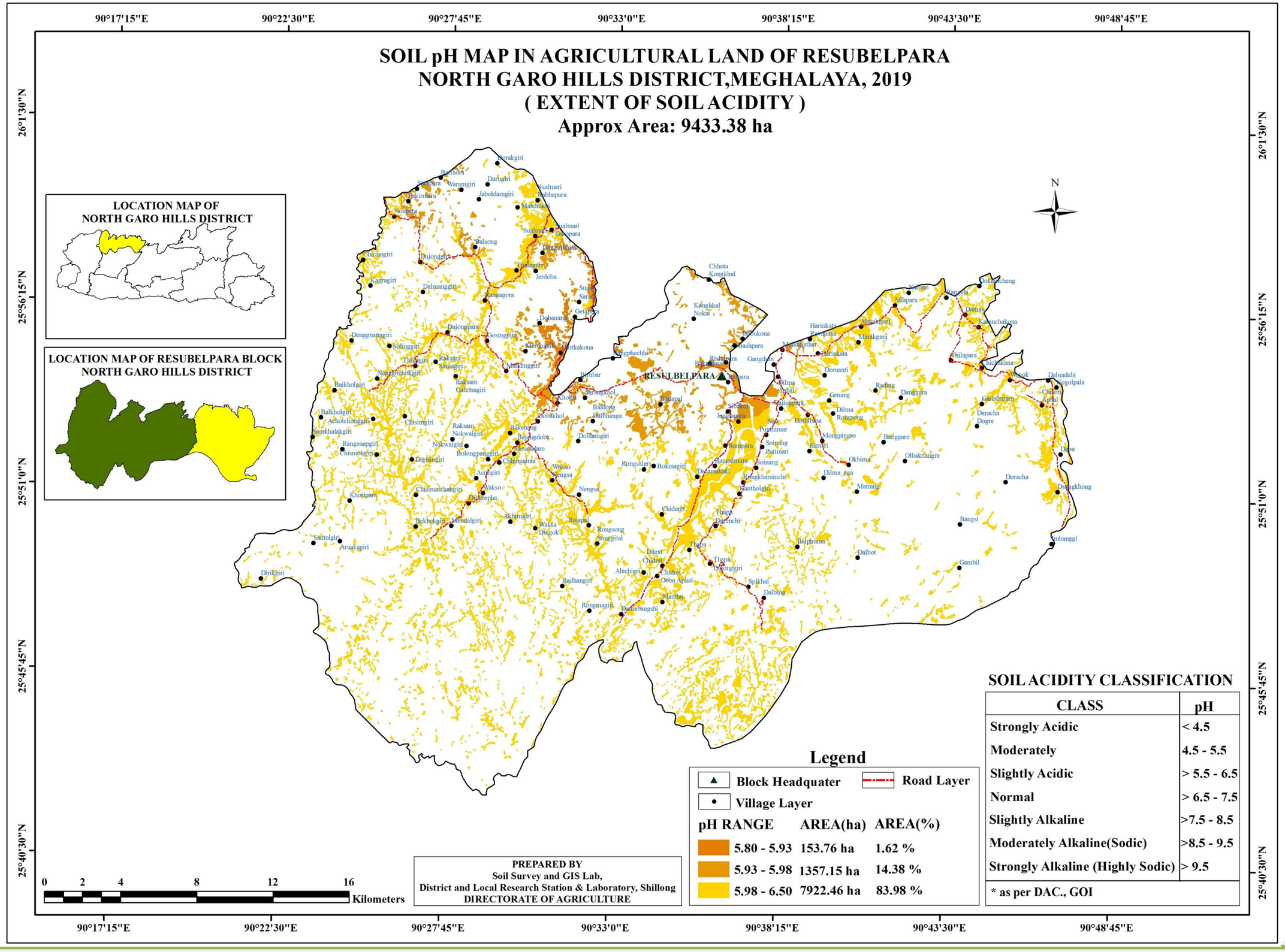

SOIL pH MAP IN AGRICULTURAL LAND OF CHOKPOT BLOCK
SOUTH GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 8017.22 ha
90°12'0"E
90°17'15"E
90°22'30"E
90°27'45"E
90°33'0"E
90°38'15"E
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N
LOCATION MAP OF SOUTH GARO HILLS DISTRICT
LOCATION MAP OF CHOKPOT BLOCK SOUTH GARO HILLS DISTRICT
N
CHOKPOT
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
5.50 - 6.00 | 8017.22 ha | 100 %
6.00 - 6.50 | 0 ha | 0 %
0 1.75 3.5 7 10.5 14
Kilometers
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE

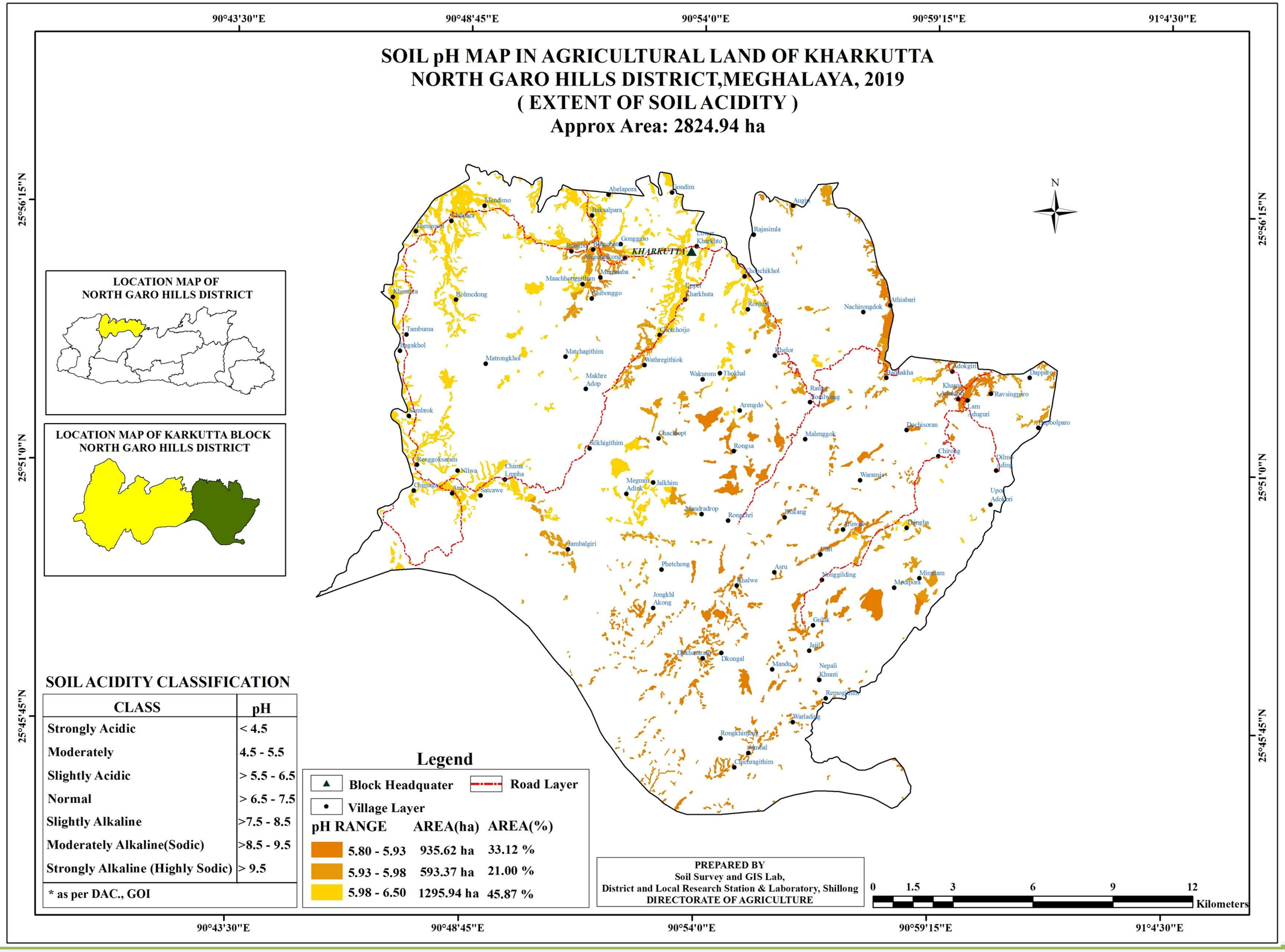

SOIL pH MAP IN AGRICULTURAL LAND OF RONGARA BLOCK
SOUTH GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 3983.77 ha
LOCATION MAP OF SOUTH GARO HILLS DISTRICT
LOCATION MAP OF RONGARA BLOCK SOUTH GARO HILLS DISTRICT
N
90°33'0"E
90°38'15"E
90°43'30"E
90°48'45"E
90°54'0"E
90°59'15"E
25°24'45"N
25°19'30"N
25°14'15"N
25°9'0"N
RONGARA
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
5.50 - 6.50 | 3983.77 ha | 100 %
6.00 - 6.50 | 0 ha | 0 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.5 3 6 9 12
Kilometers


SOIL pH MAP IN AGRICULTURAL LAND OF GASUAPARA BLOCK
SOUTH GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 7594.35 ha
90°12'0"E
90°17'15"E
90°22'30"E
90°27'45"E
90°33'0"E
25°19'30"N
25°14'15"N
25°9'0"N
LOCATION MAP OF SOUTH GARO HILLS DISTRICT
LOCATION MAP OF GASUAPARA BLOCK SOUTH GARO HILLS DISTRICT
N
NAGRAJORA
GANCHING
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH Ranges | Area (ha) | Area (%)
4.50 - 5.50 | 703.53 ha | 9.26 %
5.50 - 6.50 | 6890.82 ha | 90.74 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.25 2.5 5 7.5 10
Kilometers


SOIL pH MAP IN AGRICULTURAL LAND OF BETASING BLOCK
SOUTH WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 14625.18 ha
89°51'0"E
89°56'15"E
90°1'30"E
90°6'45"E
25°35'15"N
25°30'0"N
25°24'45"N
LOCATION MAP OF SOUTH WEST GARO HILLS DISTRICT
LOCATION MAP OF BETASING BLOCK SOUTH WEST GARO HILLS DISTRICT
N
BETASING
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.70 - 5.80 200.89 ha 1.37 %
5.80 - 5.90 4572.7 ha 31.26 %
5.90 - 6.50 9851.59 ha 67.36 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.25 2.5 5 7.5 10
Kilometers


SOIL pH MAP IN AGRICULTURAL LAND OF ZIKZAK BLOCK
SOUTH WEST GARO HILLS DISTRICT, MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 13557.22 ha
89°45'45"E
89°51'0"E
89°56'15"E
90°1'30"E
90°6'45"E
25°30'0"N
25°24'45"N
25°19'30"N
25°14'15"N
LOCATION MAP OF
SOUTH WEST GARO HILLS DISTRICT
LOCATION MAP OF ZIKZAK BLOCK
SOUTH WEST GARO HILLS DISTRICT
N
ZIKZAK
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.70 - 5.80 0.19 ha 0.001 %
5.80 - 5.90 3779.93 ha 27.88 %
5.90 - 6.50 9777.09 ha 72.12 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.5 3 6 9 12
Kilometers


SOIL pH MAP IN AGRICULTURAL LAND OF RESUBELPARA
NORTH GARO HILLS DISTRICT,MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 9433.38 ha
LOCATION MAP OF NORTH GARO HILLS DISTRICT
LOCATION MAP OF RESUBELPARA BLOCK NORTH GARO HILLS DISTRICT
RESUBELPARA
N
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.80 - 5.93 153.76 ha 1.62 %
5.93 - 5.98 1357.15 ha 14.38 %
5.98 - 6.50 7922.46 ha 83.98 %
SOIL ACIDITY CLASSIFICATION
CLASS pH
Strongly Acidic < 4.5
Moderately 4.5 - 5.5
Slightly Acidic > 5.5 - 6.5
Normal > 6.5 - 7.5
Slightly Alkaline >7.5 - 8.5
Moderately Alkaline(Sodic) >8.5 - 9.5
Strongly Alkaline (Highly Sodic) > 9.5
* as per DAC., GOI
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 2 4 8 12 16
Kilometers
90°17'15"E
90°22'30"E
90°27'45"E
90°33'0"E
90°38'15"E
90°43'30"E
90°48'45"E
26°1'30"N
25°56'15"N
25°51'0"N
25°45'45"N
25°40'30"N


SOIL pH MAP IN AGRICULTURAL LAND OF KHARKUTTA
NORTH GARO HILLS DISTRICT,MEGHALAYA, 2019
(EXTENT OF SOIL ACIDITY)
Approx Area: 2824.94 ha
90°43'30"E
90°48'45"E
90°54'0"E
90°59'15"E
91°4'30"E
25°56'15"N
25°51'0"N
25°45'45"N
N
KHARKUTTA
LOCATION MAP OF NORTH GARO HILLS DISTRICT
LOCATION MAP OF KARKUTTA BLOCK NORTH GARO HILLS DISTRICT
SOIL ACIDITY CLASSIFICATION
CLASS | pH
Strongly Acidic | < 4.5
Moderately | 4.5 - 5.5
Slightly Acidic | > 5.5 - 6.5
Normal | > 6.5 - 7.5
Slightly Alkaline | >7.5 - 8.5
Moderately Alkaline(Sodic) | >8.5 - 9.5
Strongly Alkaline (Highly Sodic) | > 9.5
* as per DAC., GOI
Legend
Block Headquater
Road Layer
Village Layer
pH RANGE AREA(ha) AREA(%)
5.80 - 5.93 935.62 ha 33.12 %
5.93 - 5.98 593.37 ha 21.00 %
5.98 - 6.50 1295.94 ha 45.87 %
PREPARED BY
Soil Survey and GIS Lab,
District and Local Research Station & Laboratory, Shillong
DIRECTORATE OF AGRICULTURE
0 1.5 3 6 9 12
Kilometers

VI. REFERENCE:

1. *Mapping of Sali Rice Areas of Meghalaya Using Remote Sensing and Ground Based Observation 2017-18, NESAC, Umiam sponsored by Department of Agriculture, Meghalaya.*
2. *Package of Practices for Organic Production of Crops and Cropping Systems, Organic Production Guide NPOF, ICAR – IIFSR, Modipuram*
3. *Technical Bulletin on Maize Production in Meghalaya, Subhash Babu et al., ICARNEH.*
4. *Annual Report 2012-13, ICAR Research Complex for NEH Region.*
5. *Acid Soils, FAO Soil Portal (http://www.fao.org/soils-portal/soil-management/management-of-some-problem-soils/acid-soils/en/).*

* * * * * * * * * * * *