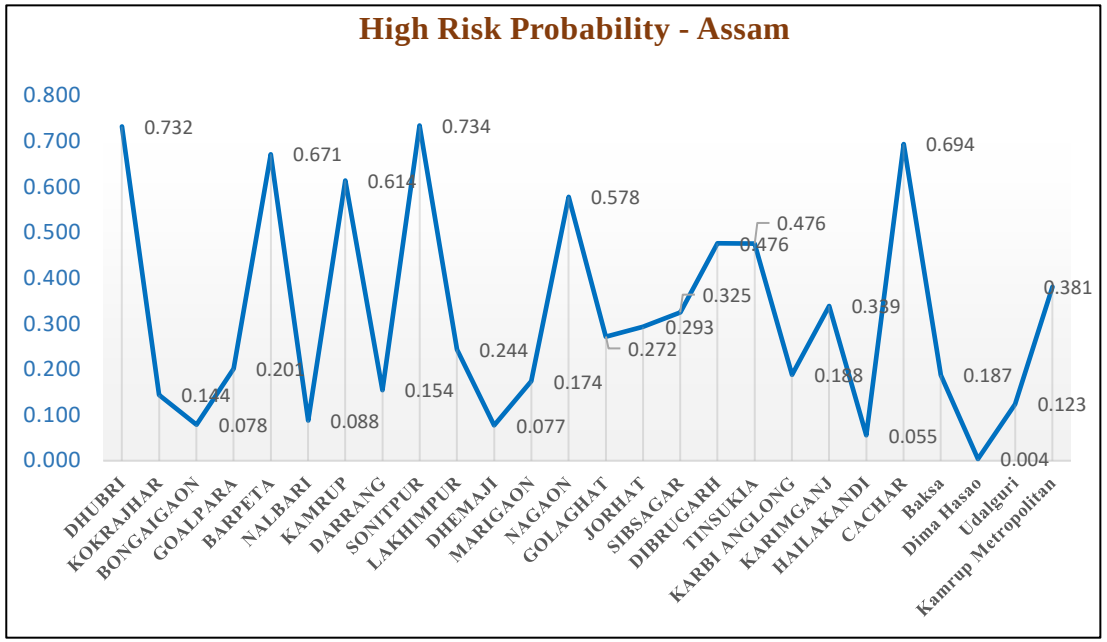
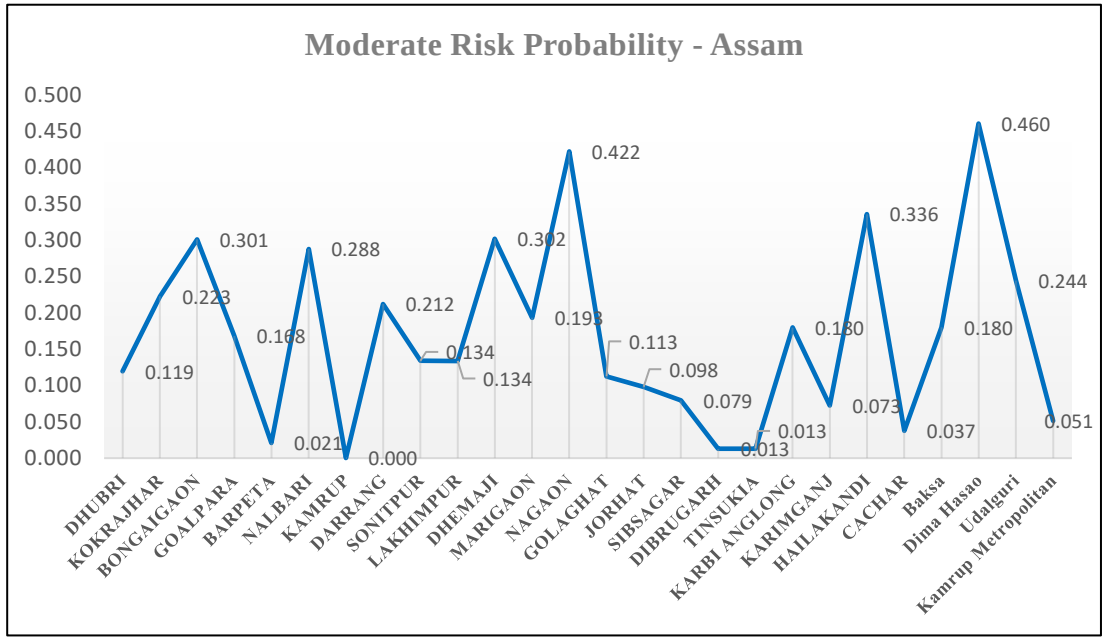
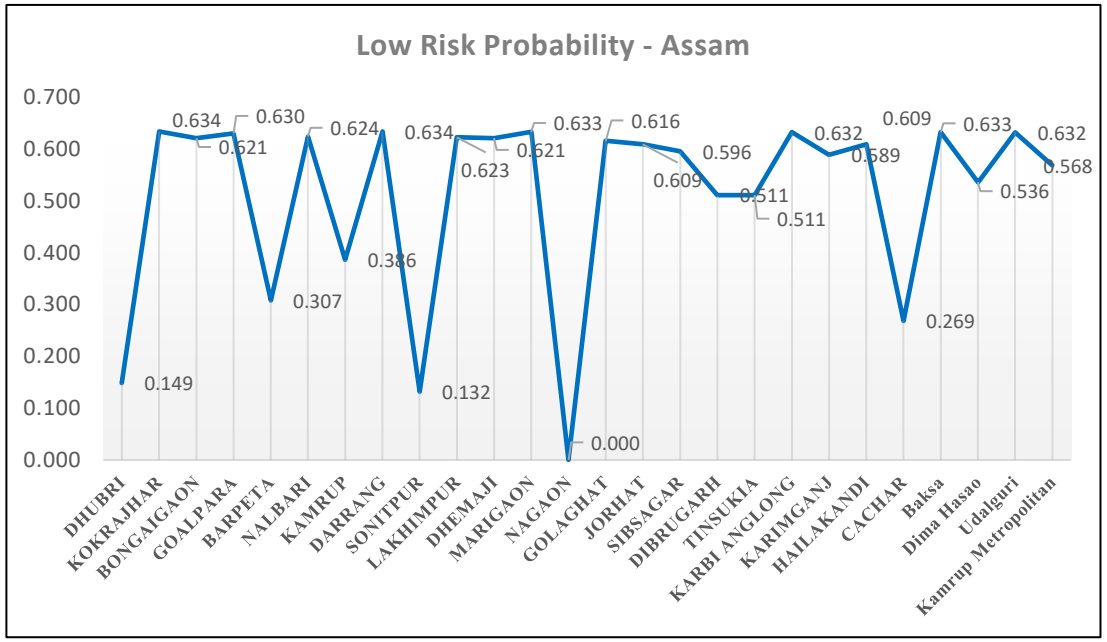
Demographic Dynamics Analytics – Assam





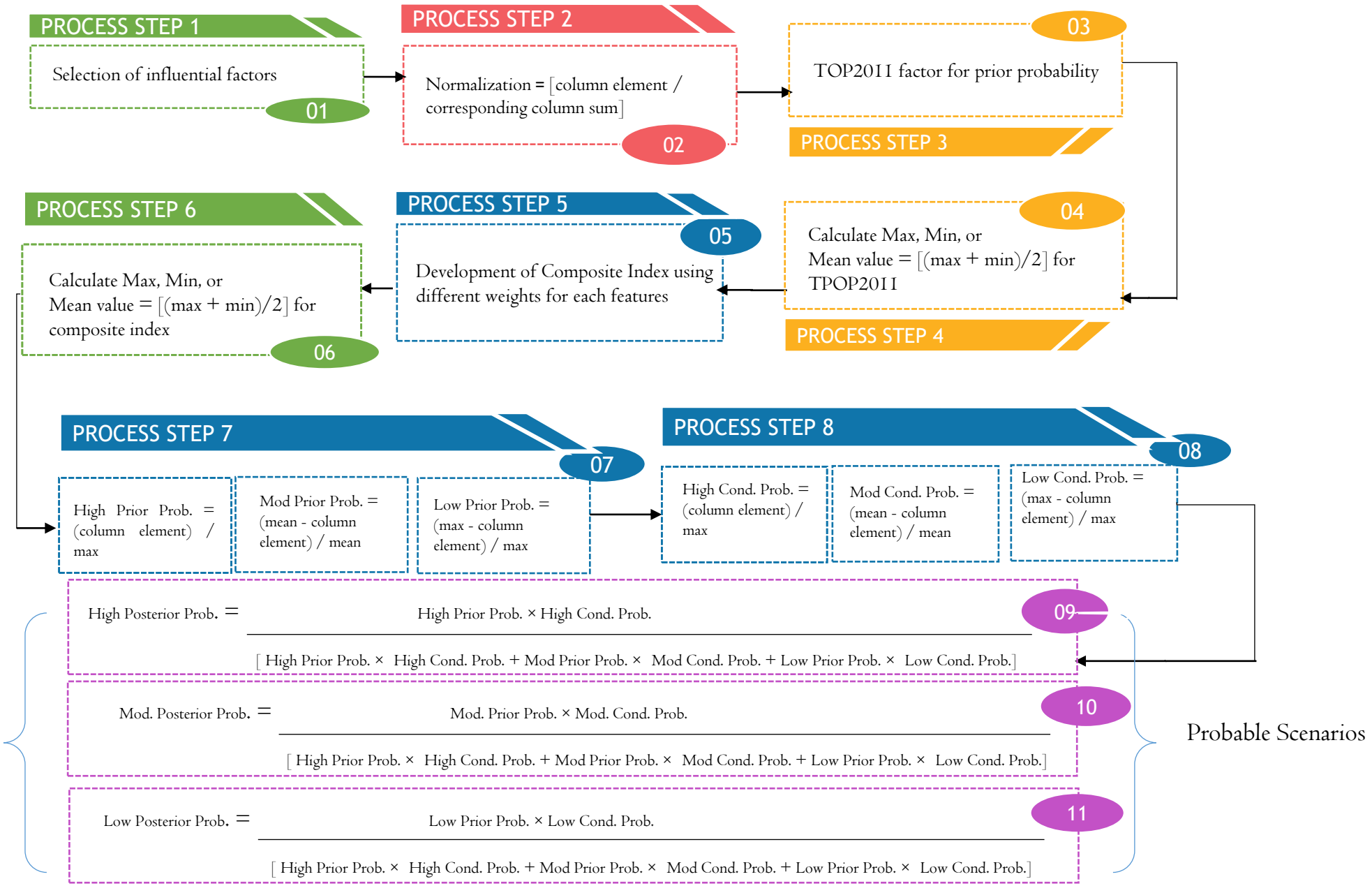


Transition Dynamics Assessment

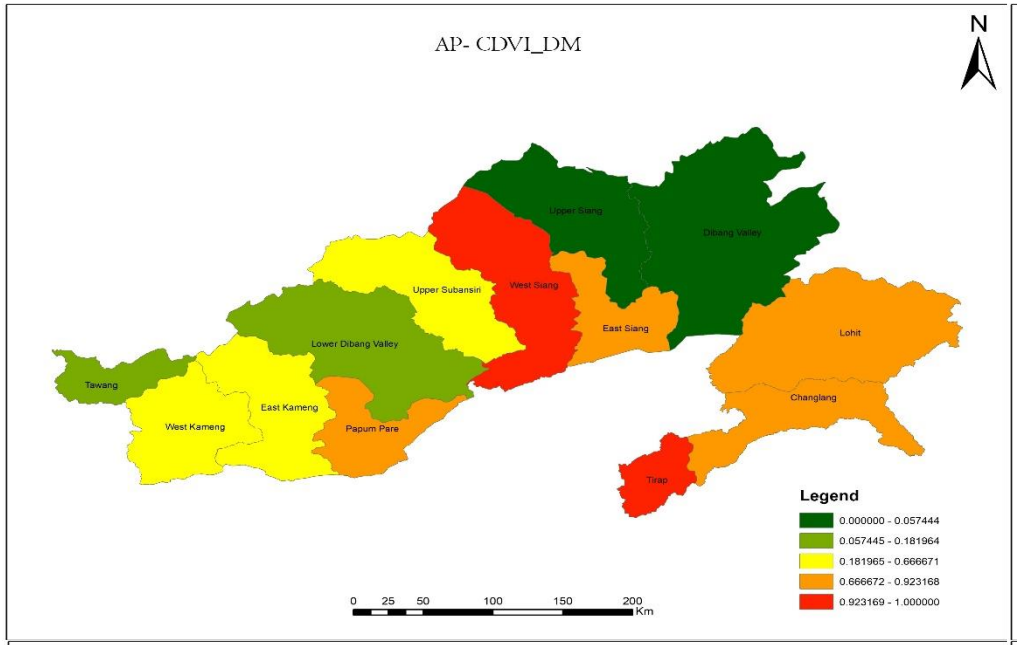
- Quantification of probabilities for assessing disaster vulnerabilities in the context of demographic dynamics in terms of different classes may help in construing the complexities of disaster management.
- By assessing the difference between class values, we can assess the deviation between classes values

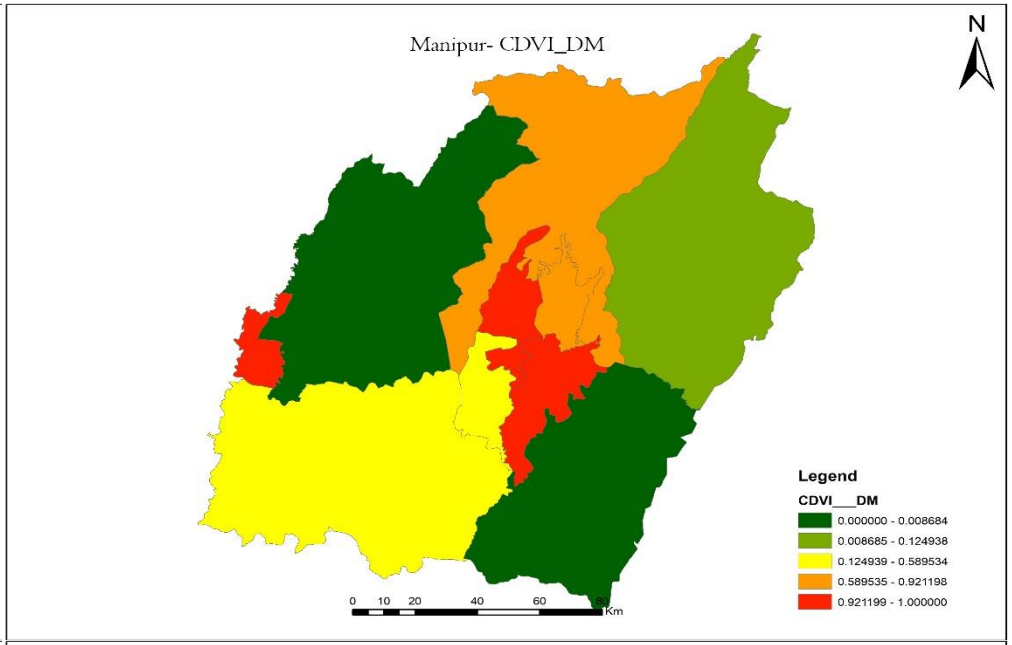
North-East Research Project Progress

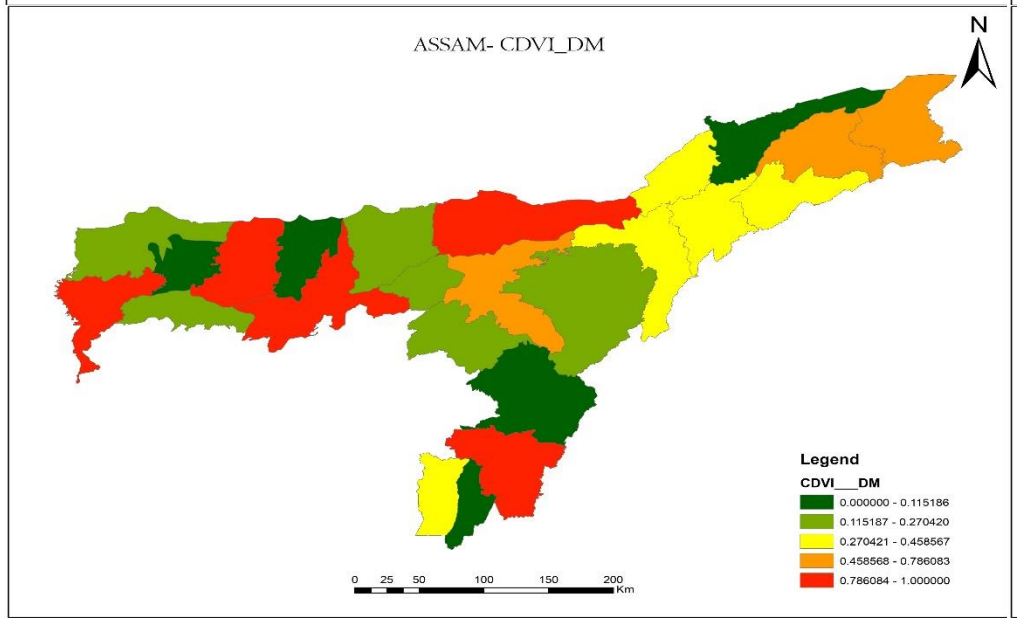
Disaster Risk Assessment in the Context of Demographic Dynamics – Naïve- Bayesian Modelling

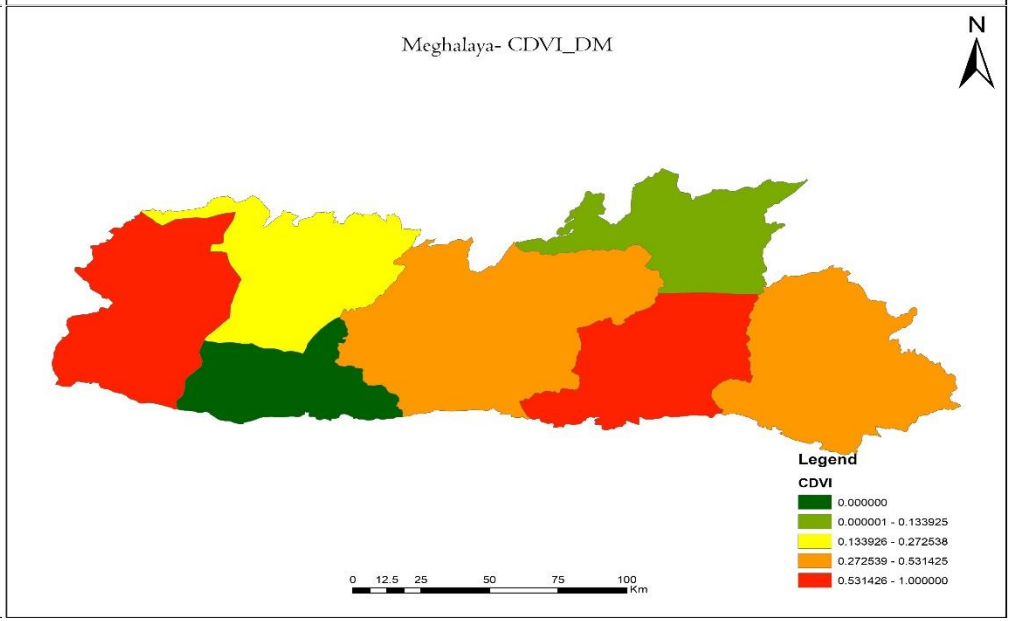


Composite Vulnerable Demographic Index (CVDI) – Disaster Management (North East)

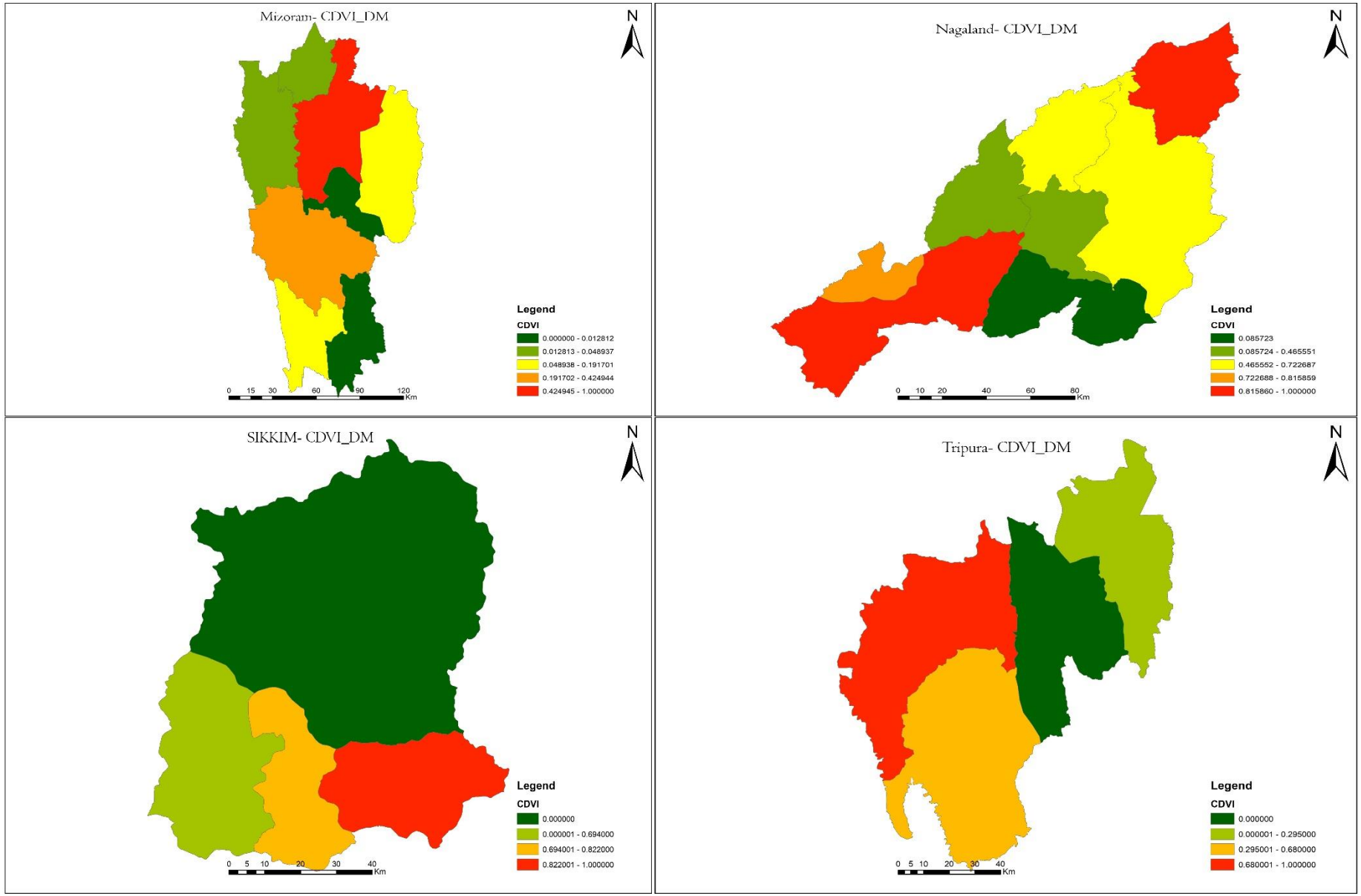








Composite Vulnerable Demographic Index (CVDI) – Disaster Management (North East)



District	TOTP	FPOP	MPOP	TWFP	TWMP	CDVI - DM
DHUBRI	1949258	951410	997848	144921	524898	0.997
KOKRAJHAR	887142	434237	452905	104809	236322	0.191
BONGAIGAON	738804	362986	375818	58264	197542	0.102
GOALPARA	1008183	494891	513292	95455	267118	0.270
BARPETA	1693622	826618	867004	116527	445297	0.914
NALBARI	771639	375633	396006	57421	210202	0.115
KAMRUP	1517542	739081	778461	200462	428492	0.835
DARRANG	928500	453227	475273	77979	246864	0.206
SONITPUR	1924110	940206	983904	233411	537195	1.000
LAKHIMPUR	1042137	512463	529674	147745	282250	0.328
DHEMAJI	686133	334884	351249	130223	186577	0.100
MARIGAON	957423	470772	486651	93164	257984	0.233
NAGAON	2823768	1384656	1439112	213270	766728	0.786
GOLAGHAT	1066888	523727	543161	170824	309104	0.367
JORHAT	1092256	535451	556805	177872	320746	0.396
SIBSAGAR	1151050	561834	589216	160646	325071	0.440
DIBRUGARH	1326335	649901	676434	192544	368013	0.647
TINSUKIA	1327929	647698	680231	190573	366623	0.646
KARBI ANGLONG	956313	466146	490167	137248	246193	0.252
KARIMGANJ	1228686	602822	625864	79373	319798	0.459
HAILAKANDI	659296	321406	337890	43448	170792	0.070
CACHAR	1736617	850333	886284	138310	469752	0.945
Baksa	950075	468745	481330	140145	266611	0.251
Dima Hasao	214102	103300	110802	28705	56323	0.000
Udalguri	831668	410051	421617	114340	230690	0.164
Kamrup Metropolitan	1253938	606353	647585	115319	375613	0.516

State	Technique	Correlation	Average Deviation	Mean Value
Assam	RFR	**0.980**	-0.025	0.369
	DTR	**0.981**	-0.036	0.379
	SVR	0.875	-0.095	0.439
	MLR	0.804	0.058	0.286
	ridge	0.924	0.058	0.286
	lasso	0.945	-0.034	0.377

CDVI: Cumulative Demographic Vulnerability Index

i. This has been computed using Naïve-Bayesian Modelling

ii. The computed CDVI values is used as the dependent variable for training the datasets

iii. Datasets which are related to the independent and dependent parameters were not changed for training and testing the datasets.

iv. Dataset is splitted into training and testing datasets.

Acronyms:

i. RFR: Random Forest

ii. DTR: Decision Tree

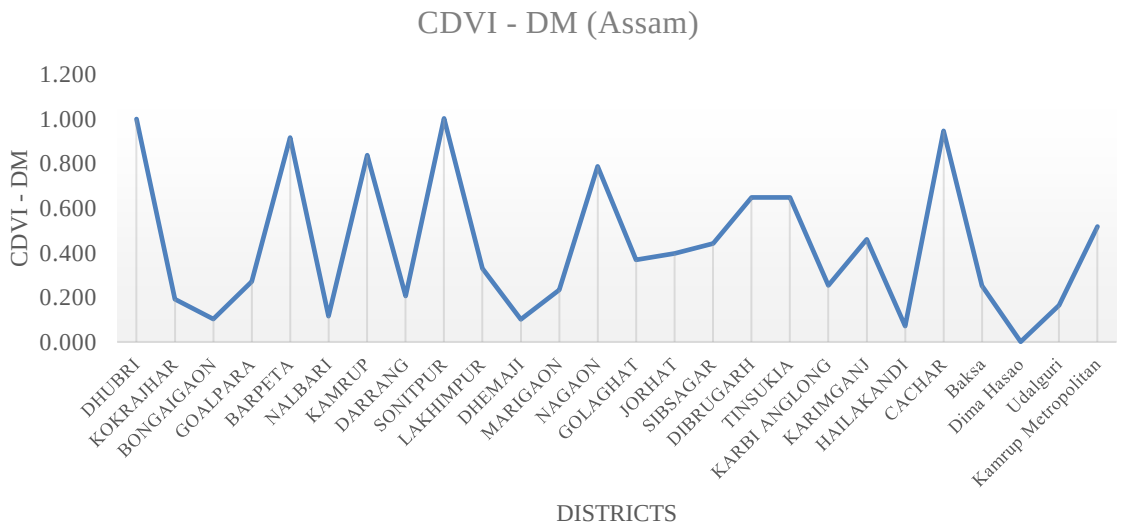
iii. SVR: Support Vector Machine

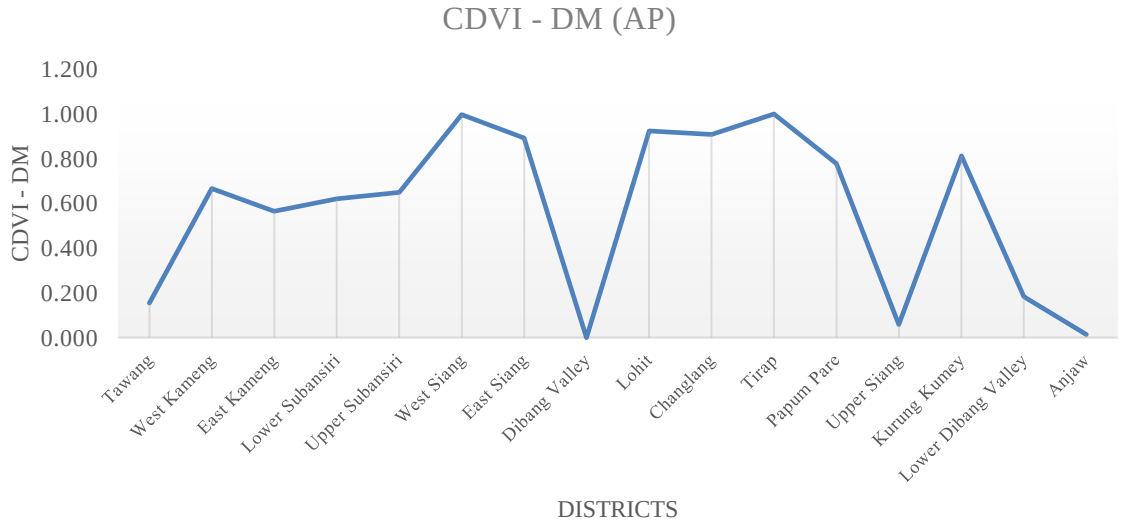
iv. MLR: Multiple Linear Regression

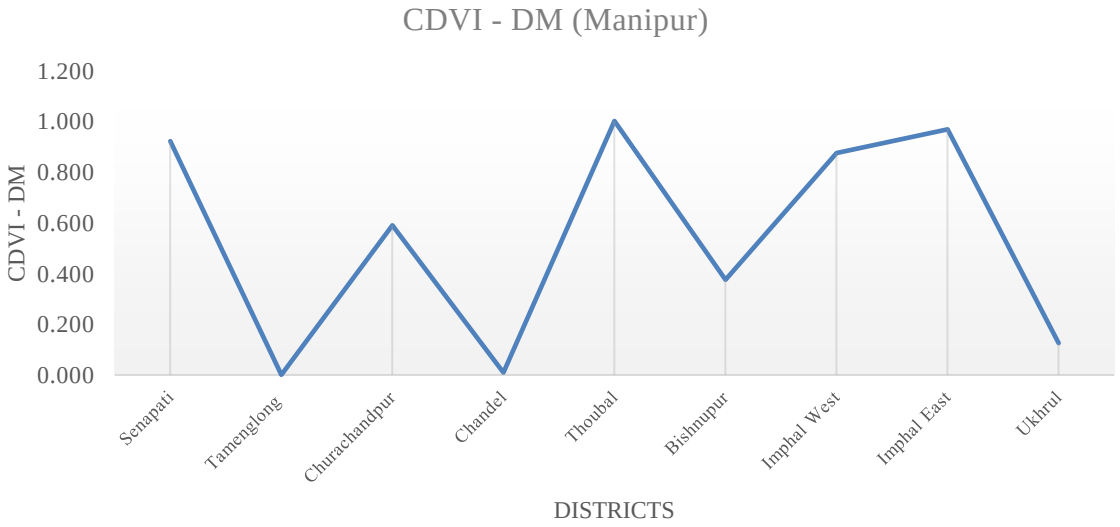
v. Ridge: Ridge Regression

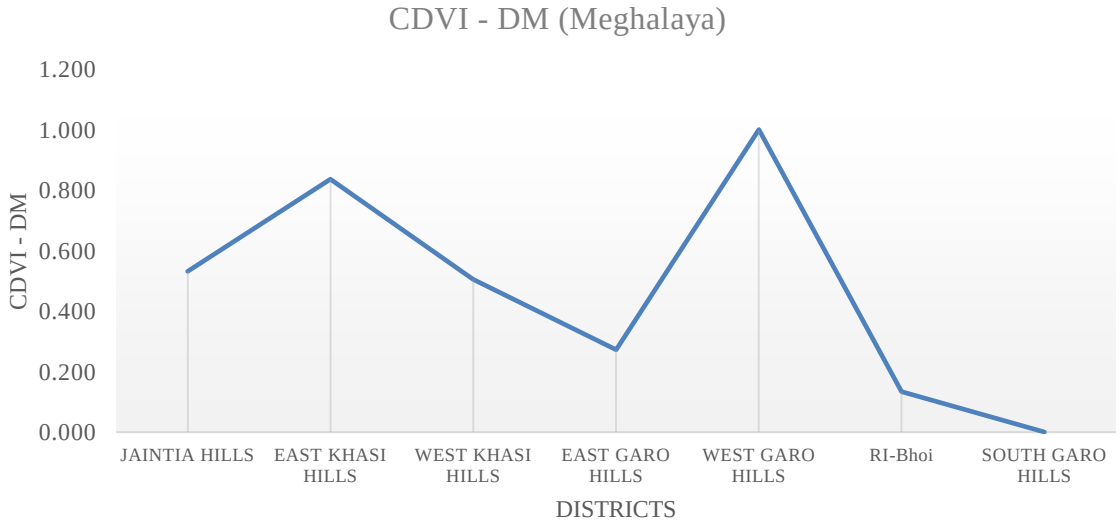
vi. Lasso: Lasso Regression

Composite Vulnerable Demographic Index – Disaster Management (North East)

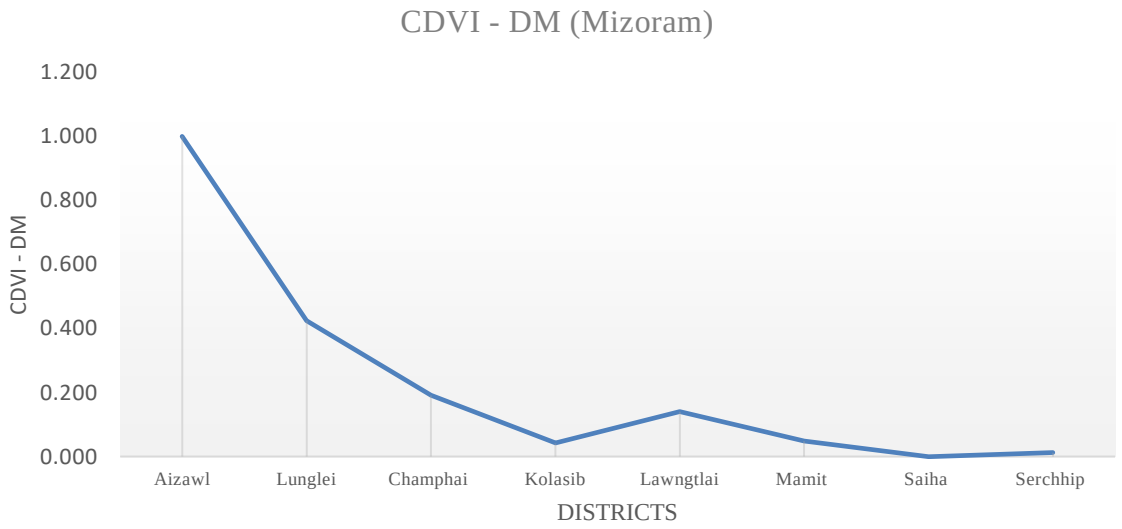


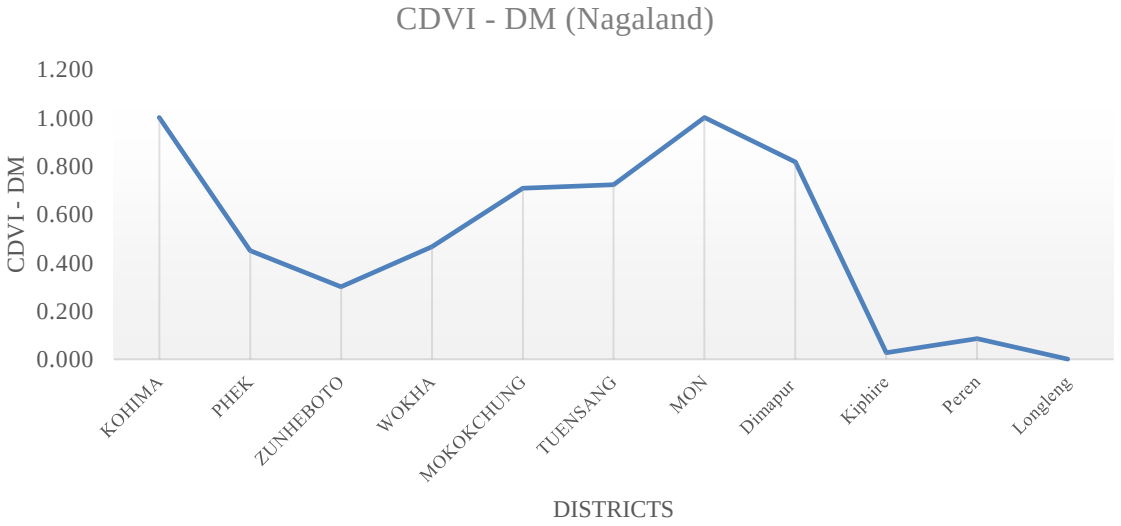


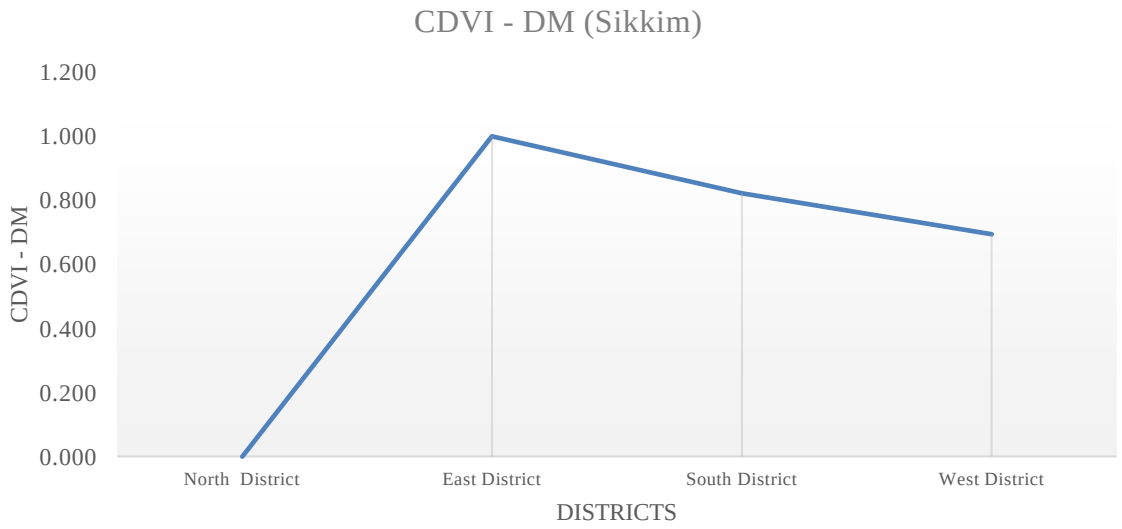


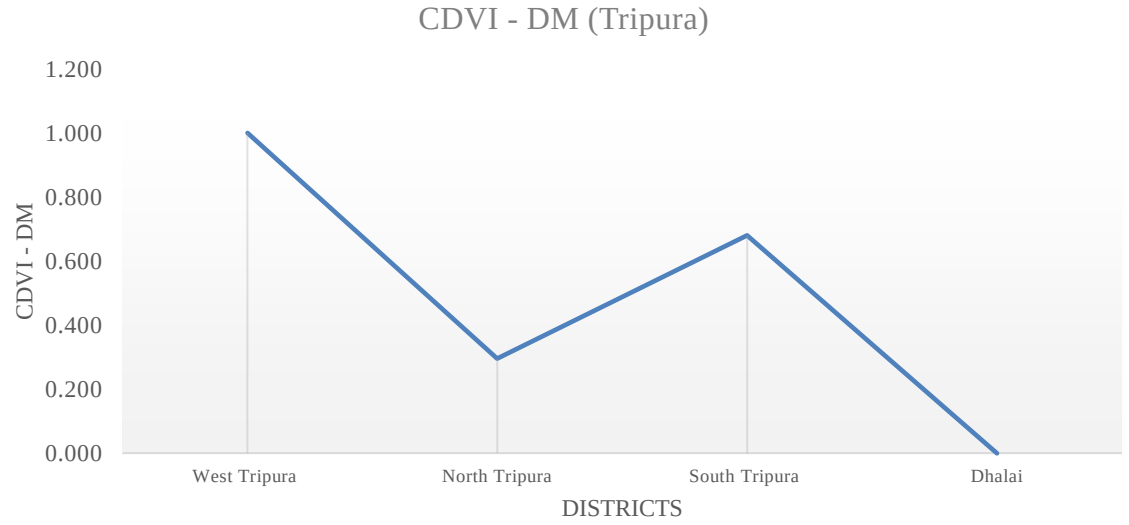


Composite Vulnerable Demographic Index – Disaster Management (North East)



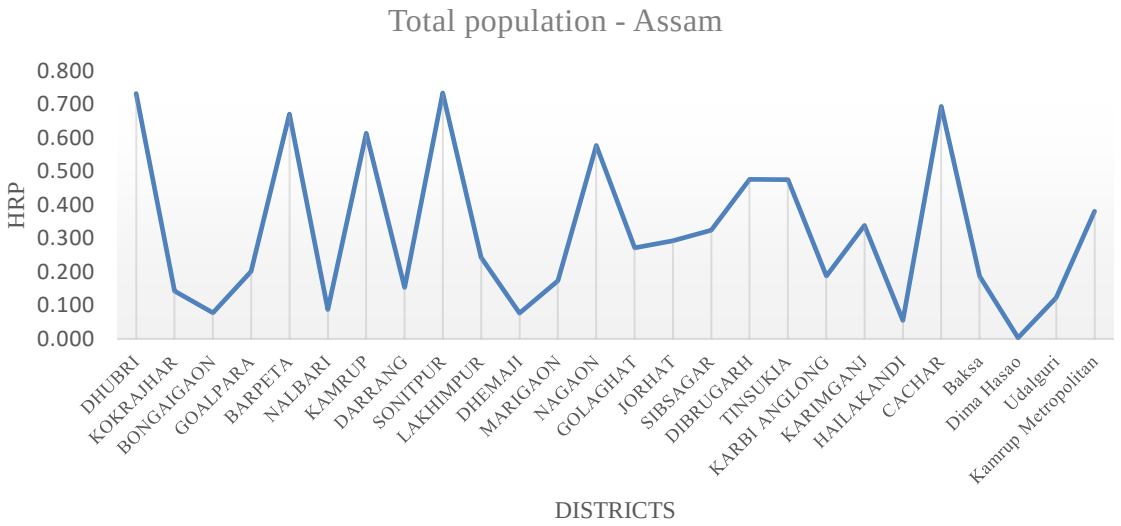


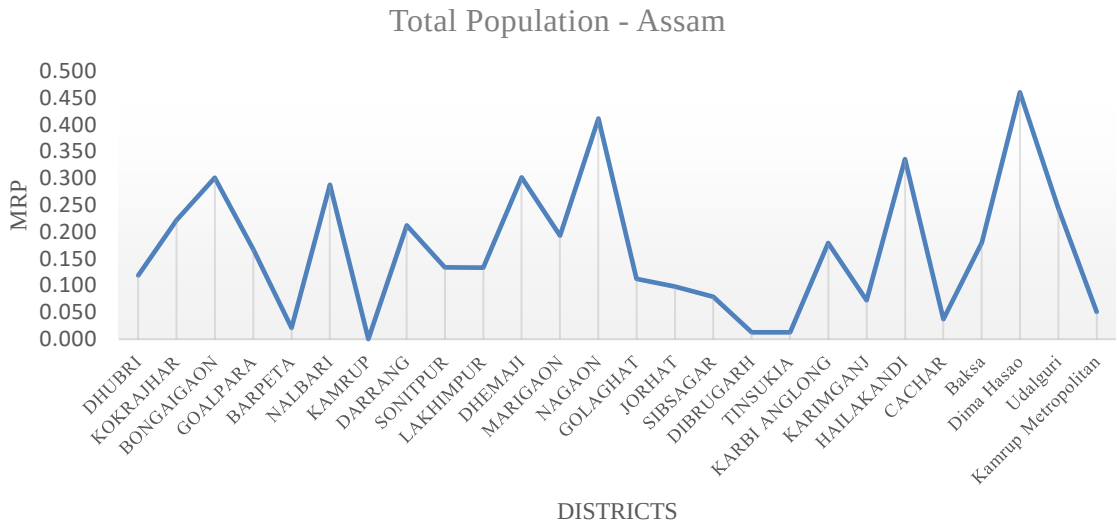


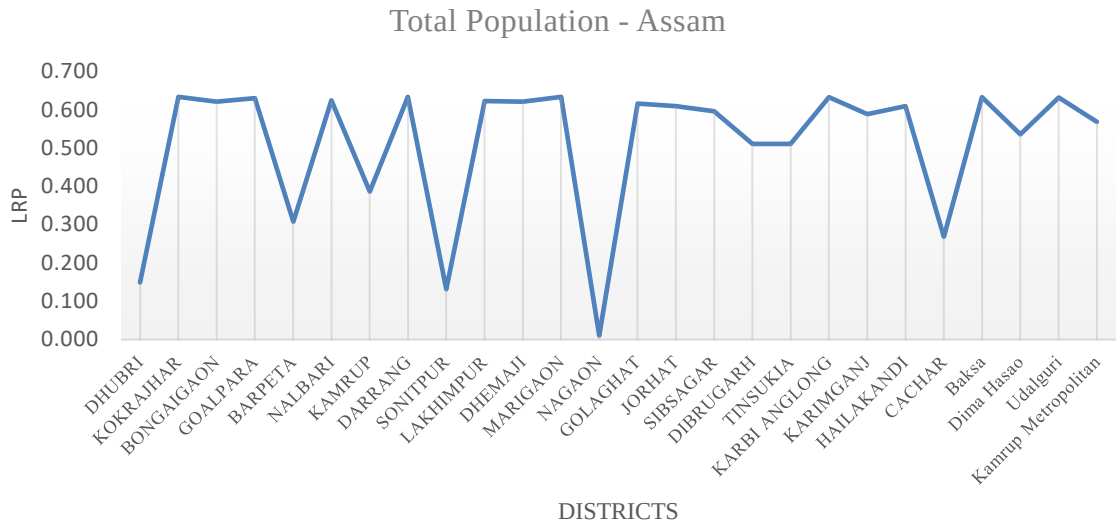


Comprehensive Scenario Generation & User Defined Real Time Analytics

Demographic Analytics - Naive Bayes Modeling
Assam







Demographic Analytics - Naive Bayes Modeling
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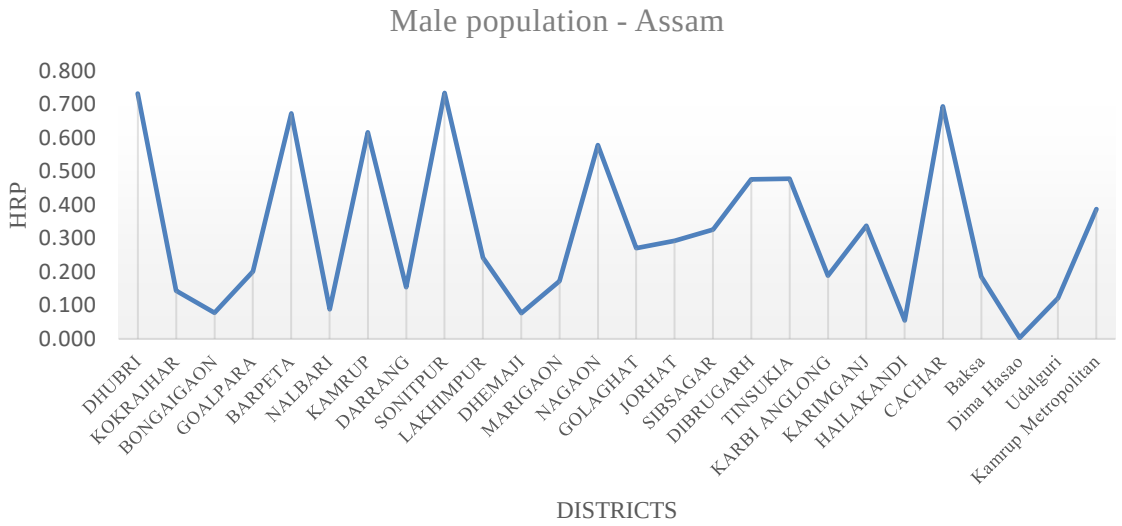

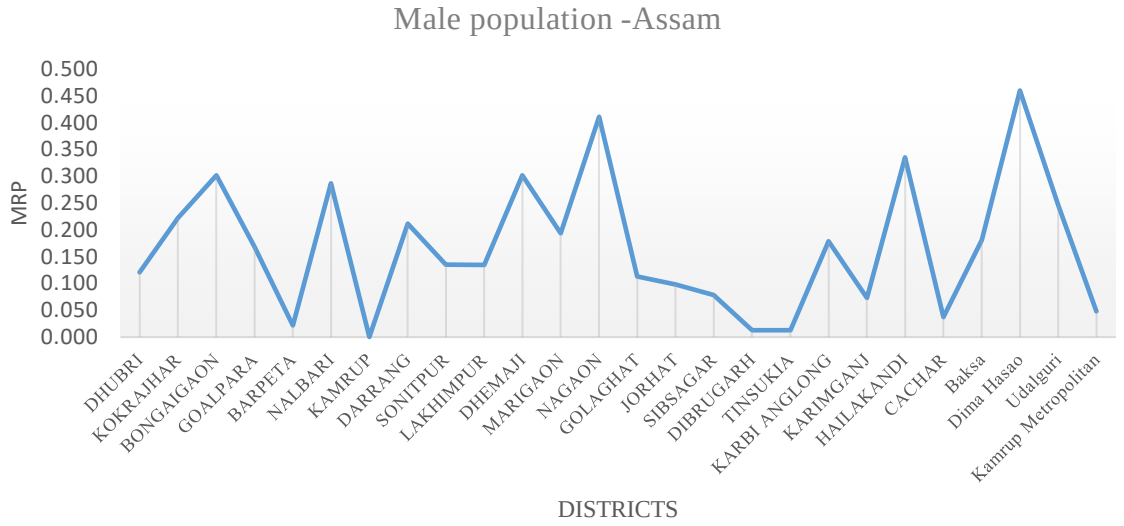

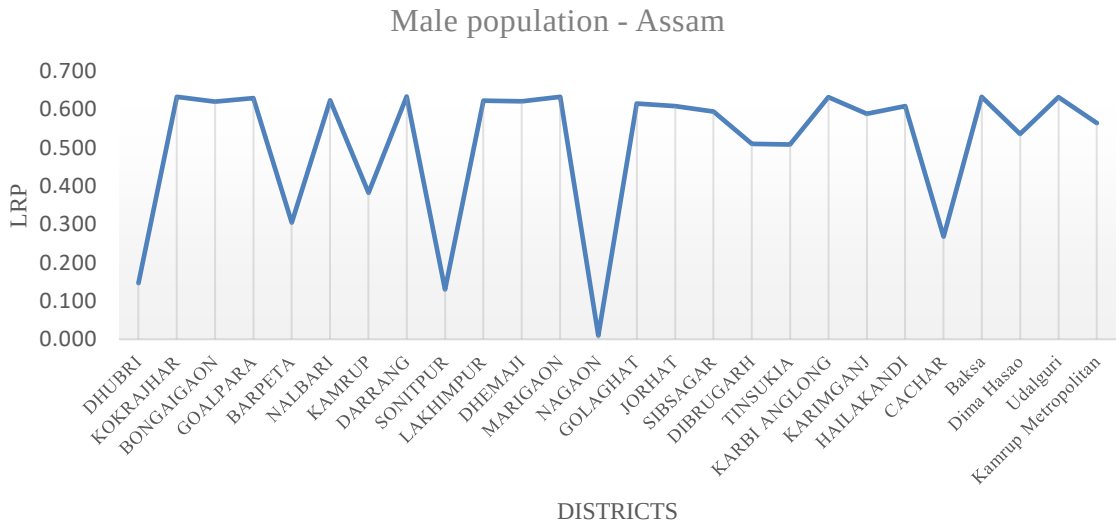

Demographic Analytics - Naive Bayes Modeling
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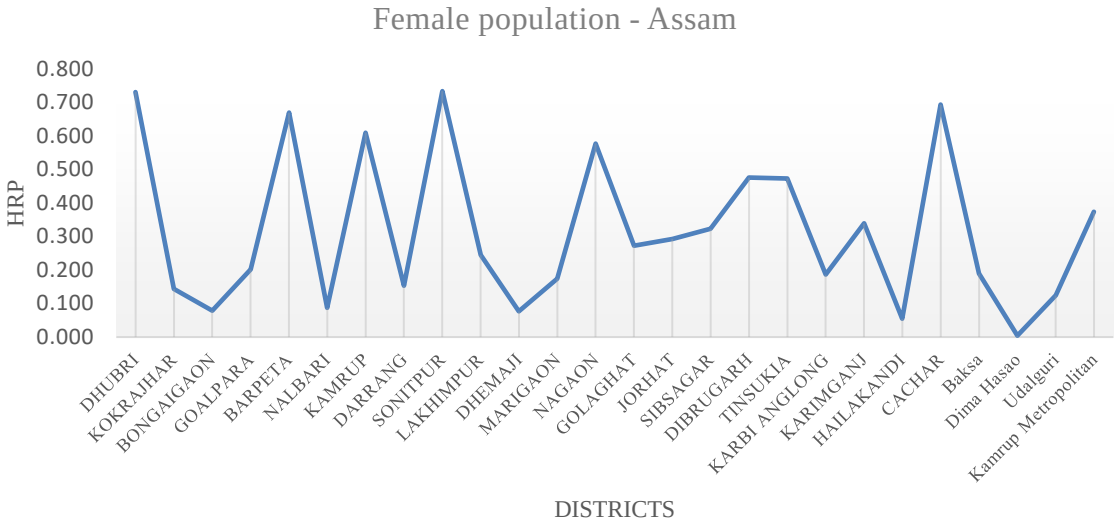

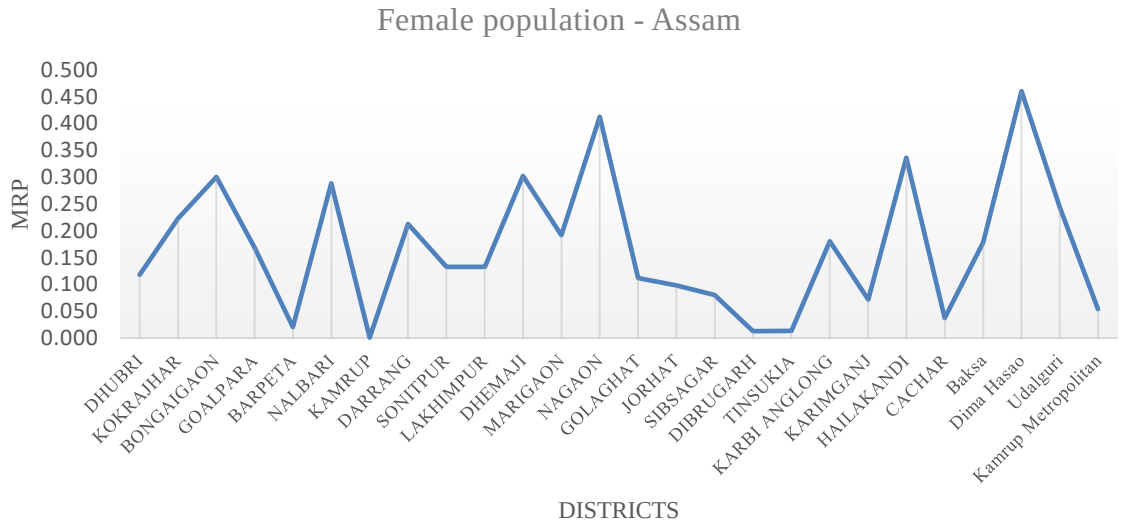

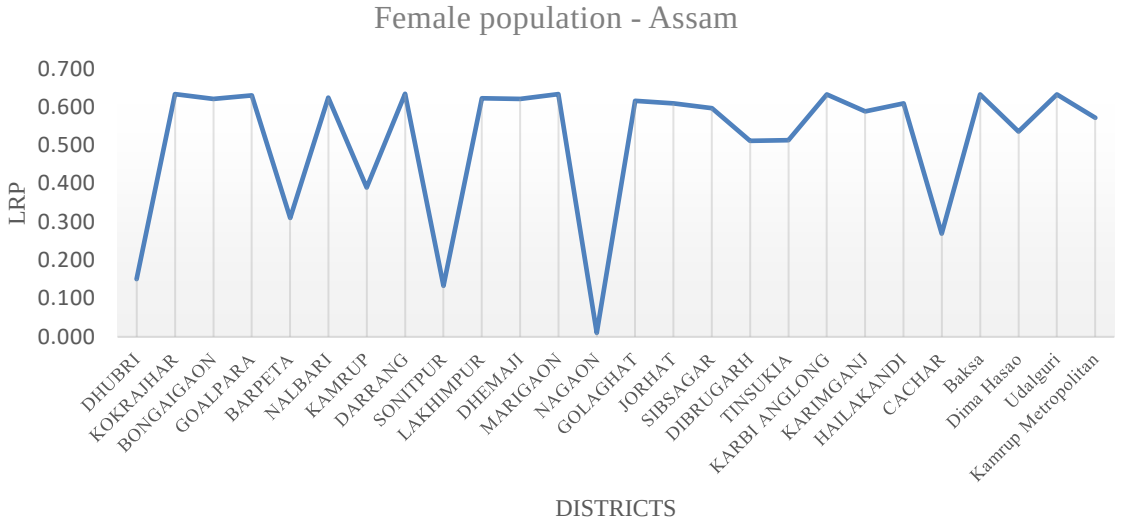

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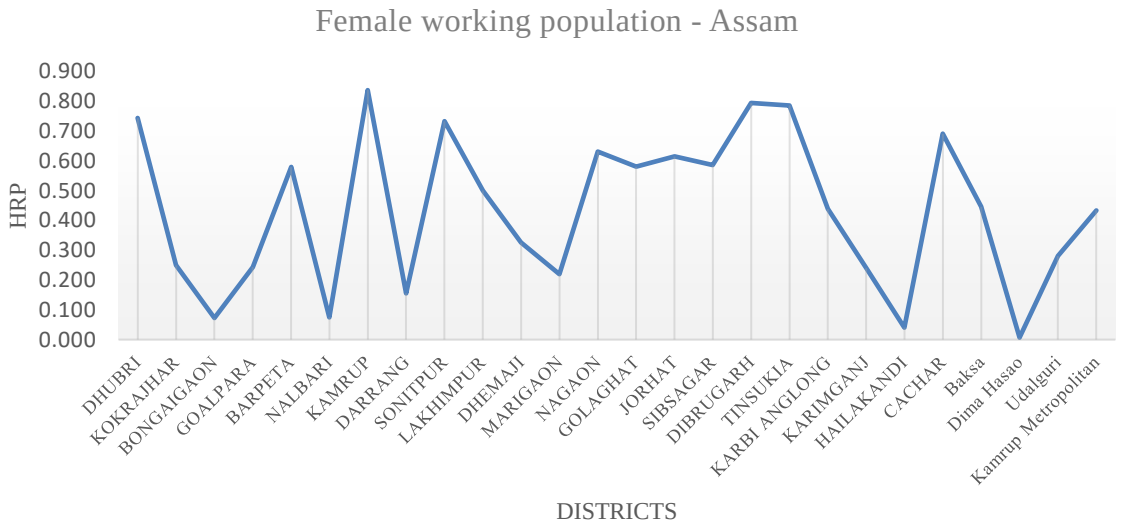

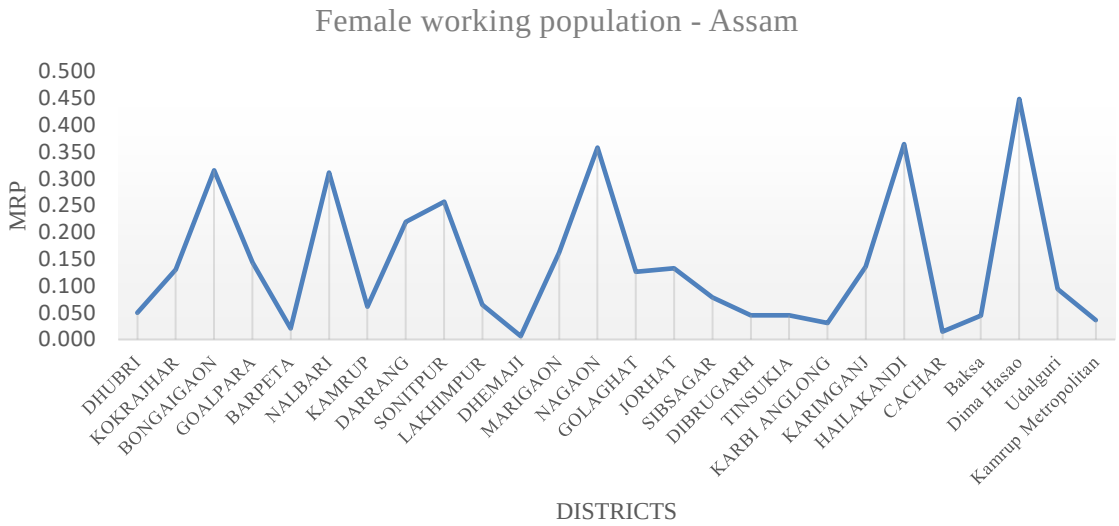

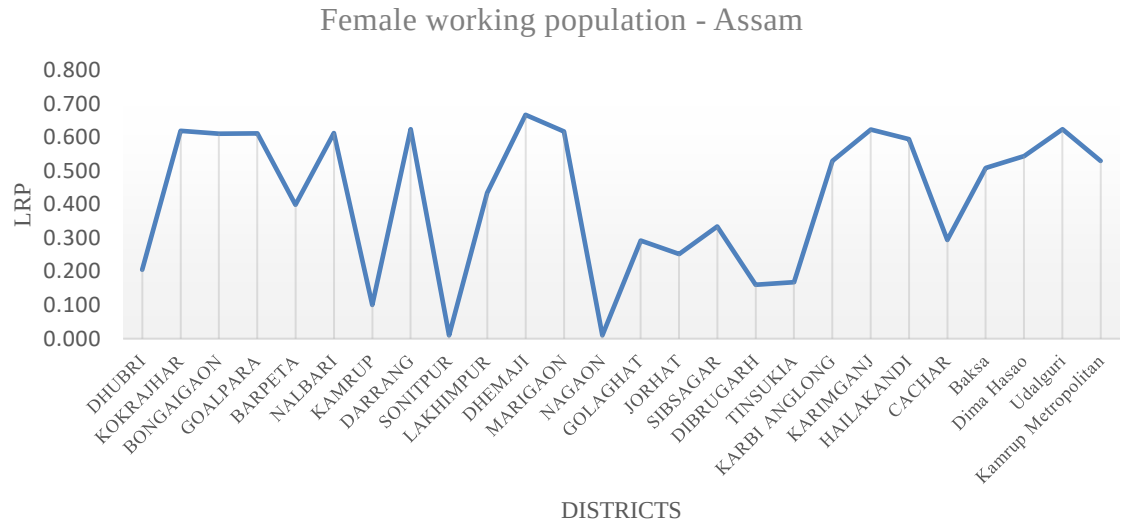

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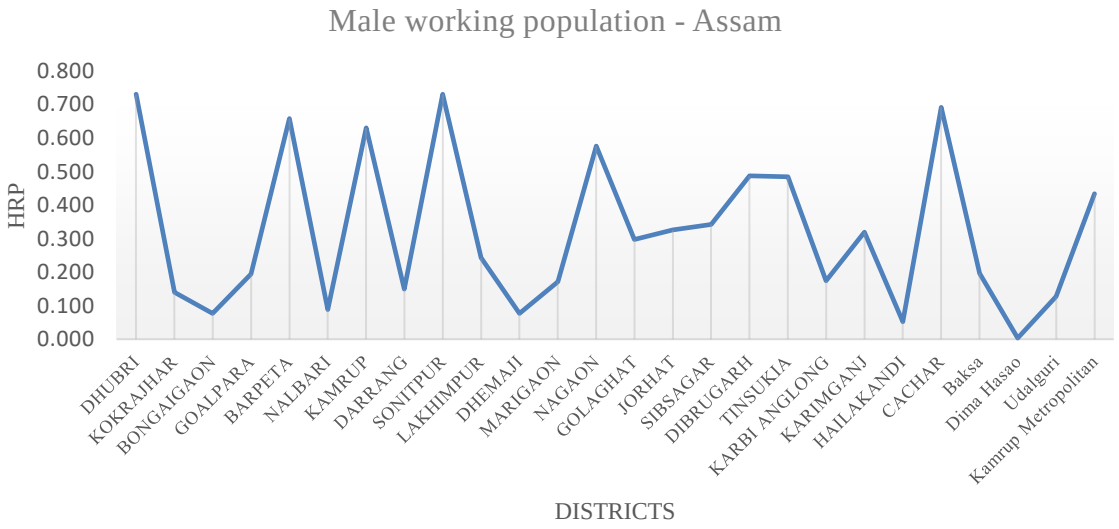

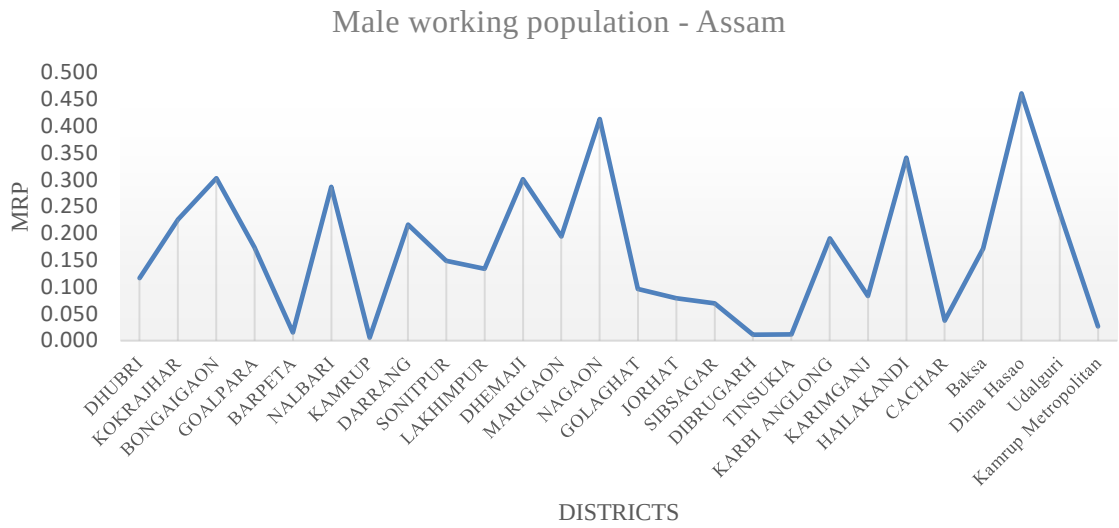

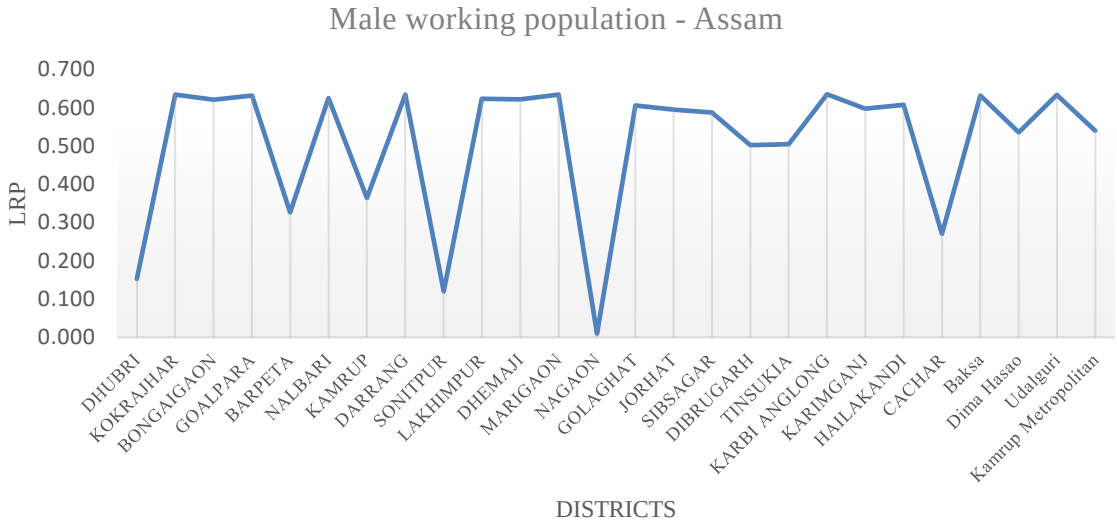

Thank You