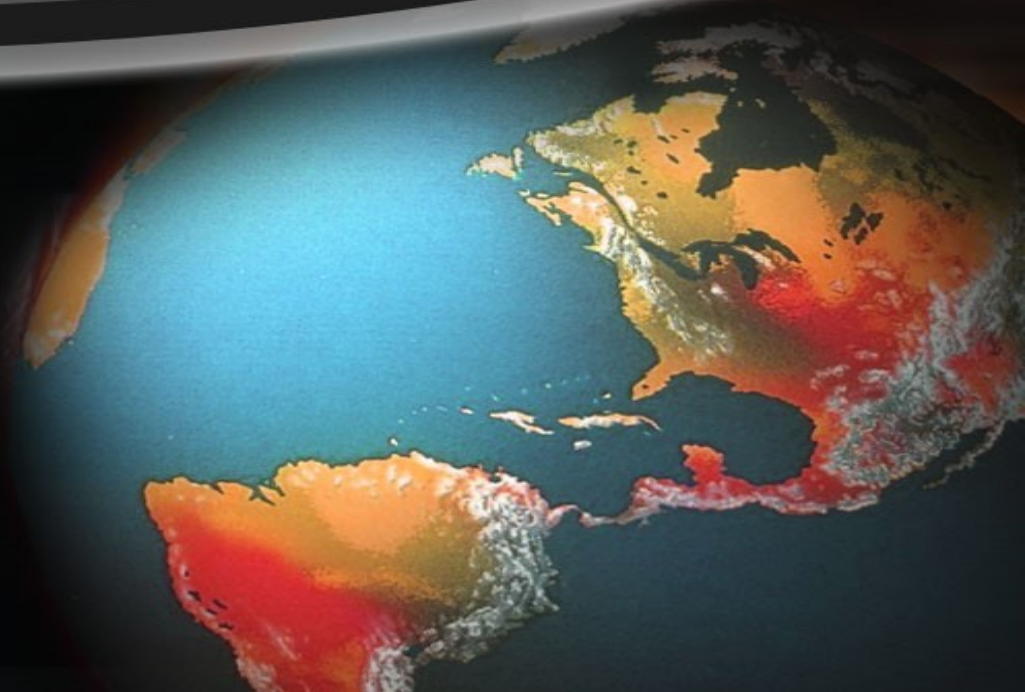




Climate-Resilient Agri-fisheries (CRA) Assessment, Targeting & Prioritization in the Provinces of Southern Leyte, Biliran, Northern Samar and Eastern Samar for the Adaptation and Mitigation Initiative in Agriculture (AMIA)

CRVA RESULTS

November 23, 2020



VISAYAS
STATE UNIVERSITY





DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL RESEARCH

Project Title: Climate-Resilient Agri-fisheries (CRA) Assessment, Targeting & Prioritization in the Provinces of Southern Leyte, Biliran, Northern Samar and Eastern Samar for the Adaptation and Mitigation Initiative in Agriculture (AMIA)

Implemented by: Visayas State University
Funded by: DA-CRAO (Formerly DA-SWCCO)
Total Amount: 7.5M

PROJECT COMPONENTS

Component 1: CRVA-CRA for four (4) provinces in Region 8

(Coverage: Biliran, Southern Leyte, Eastern Samar and Northern Samar)

Focal person: Dr. Pastor P. Garcia

Budget: P4M

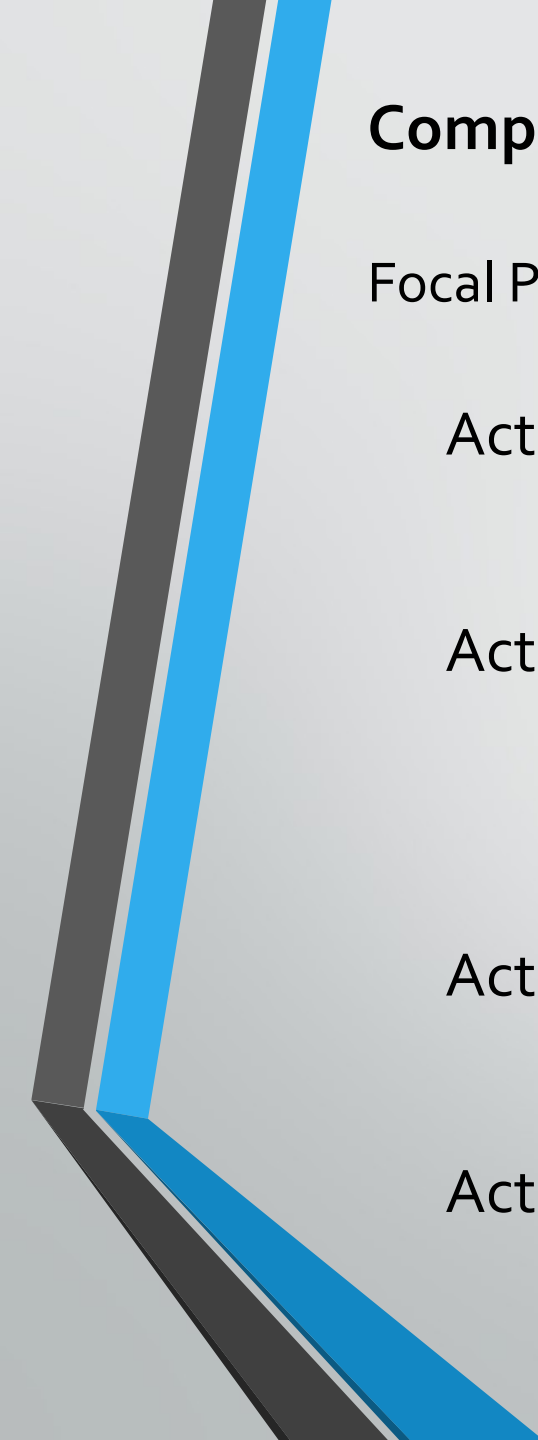
Component 2: CRVA Training for RFO Teams

(Coverage: Whole Philippines)

Focal person: Prof. Alan B. Loreto

Budget : 3.5M

TOTAL BUDGET: 7.5M



Component 1: CRVA-CRA for provinces of Biliran, Southern Leyte, Eastern Samar and Northern Samar

Focal Person: Pastor P. Garcia (Budget =4M)

Activity 1. Climate Risk Vulnerability Assessment (CRVA)

Activity 2. Climate-Resilient Agriculture (CRA) practices prioritization and planning

Activity 3. AMIA-related seminar-workshops (Budget= 1M)

Activity 4. Project Management and Monitoring



**Component 1: CRVA-CRA for provinces of Biliran, Southern Leyte,
Eastern Samar and Northern Samar**

Focal Person: Pastor P. Garcia

Activity 1. Climate Risk Vulnerability Assessment (CRVA)

Activity 2. Climate-Resilient Agriculture (CRA) practices prioritization and
planning

Activity 3. AMIA-related seminar-workshops (DA-RFO 8) – Budget= 1M

Activity 4. Project Management and Monitoring

AMIA-RELATED SEMINAR-WORKSHOPS CONDUCTED (DA-RFO8)

Training No.	Title of Activities	Date Conducted/Venue	No. of Days	No. of Participants
1	SEMINAR-WORKSHOP ON MAINSTREAMING AMIA IN AGRICULTURE'S PLANS, PROGRAMS AND BYDGET	March 25-27, 2019 <i>Eco-FaRMI Training Hall, Visayas State University, Baybay City, Leyte</i>	3	34
2	SEMINAR-WORKSHOP ON CLIMATE INFORMATION SERVICES AND CLIMATE-RESILIENT FIELD SCHOOL (CrFS)	August 20-22, 2019 <i>Eco-FaRMI Training Hall, Visayas State University, Baybay City, Leyte</i>	3	45
3	SEMINAR-WORKSHOP ON STRENGTHENING OF FARMER'S ORGANIZATION RELATIONSHIPS AND ENHANCING ORGANIZATIONAL PERFORMANCE ON CLIMATE CHANGE IN AGRICULTURE	October 28-30, 2019 <i>Eco-FaRMI Training Hall, Visayas State University, Baybay City, Leyte</i>	3	55
4	SEMINAR-WORKSHOP ON MONITORING AND EVALUATING AGRICULTURE RESILIENCE	November 7-9, 2019 <i>Eco-FaRMI Training Hall, Visayas State University, Baybay City, Leyte</i>	3	47

BUDGET: 1M



**Component 1: CRVA-CRA for provinces of Biliran, Southern Leyte,
Eastern Samar and Northern Samar**

Focal Person: Pastor P. Garcia

Activity 1. Climate Risk Vulnerability Assessment (CRVA)

Activity 2. Climate-Resilient Agriculture (CRA) practices prioritization and
planning

Activity 3. AMIA-related seminar-workshops (DA-RFO 8)

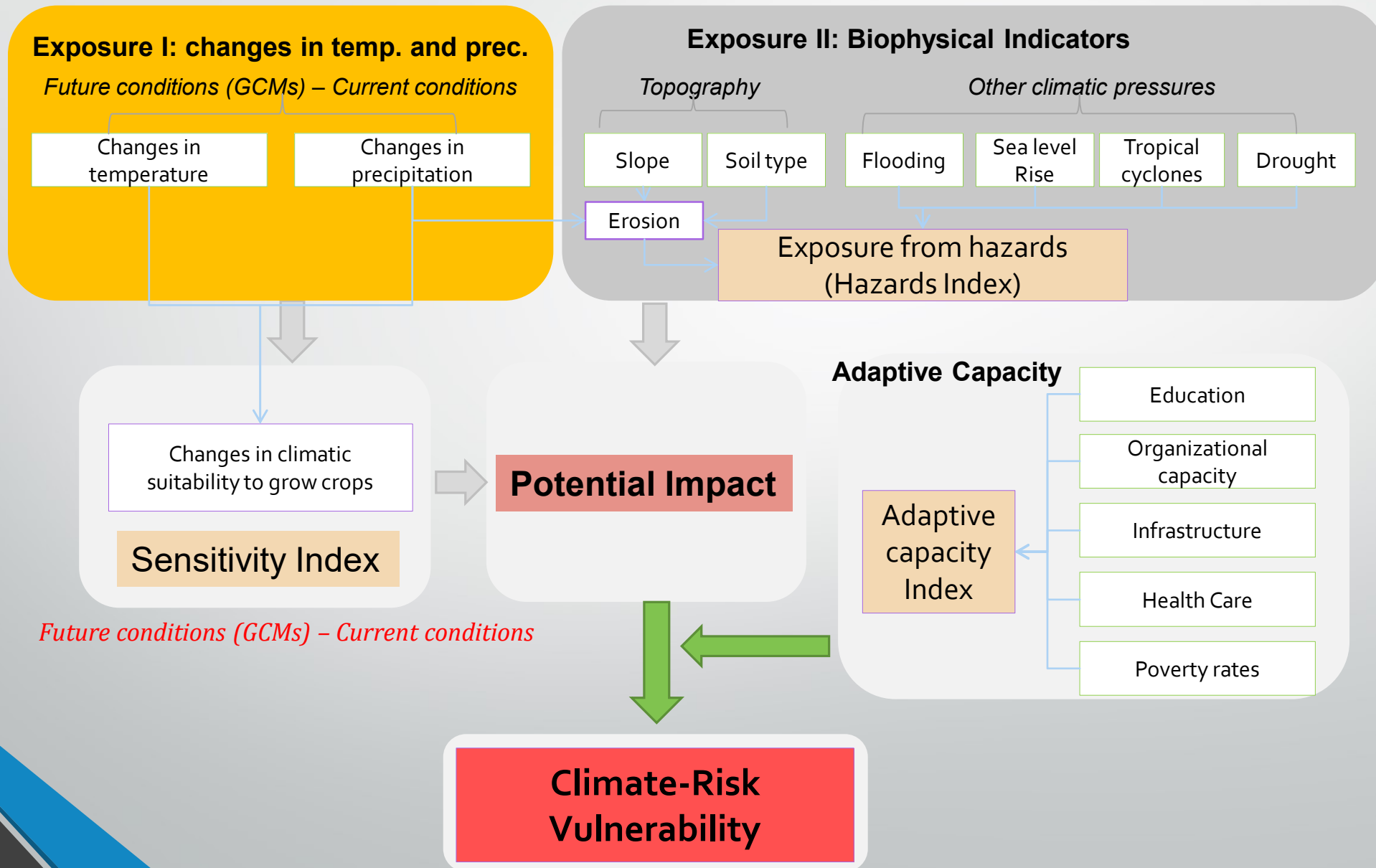
Activity 4. Project Management and Monitoring

Climate-Risk Vulnerability assessment (CRVA)

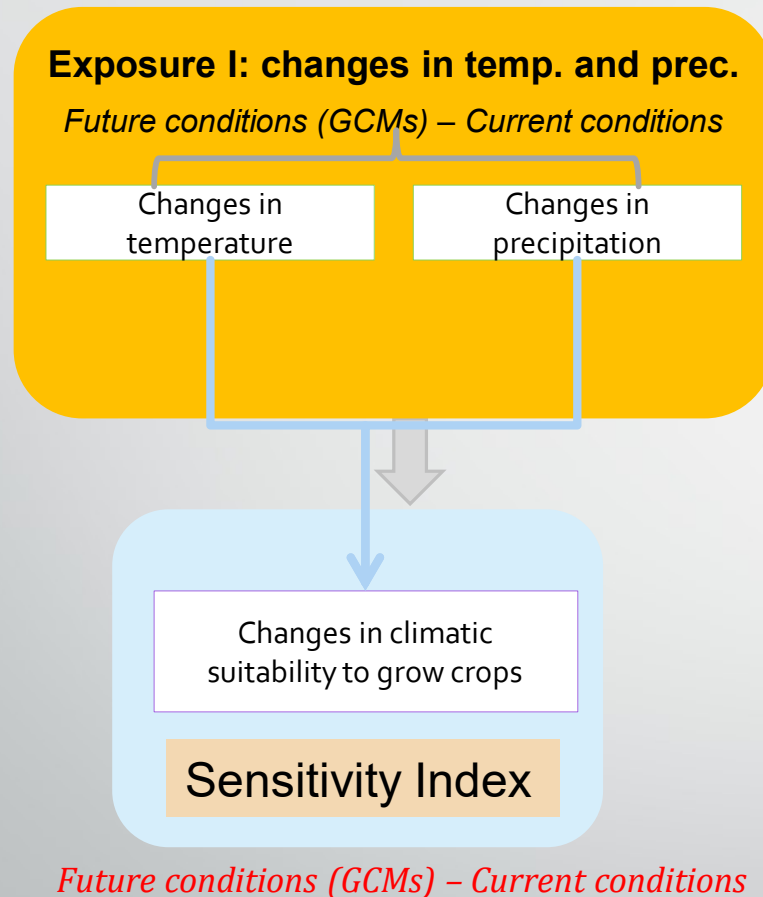
CRVA = CLIMATE SENSITIVITY + EXPOSURE TO HAZARDS
– ADAPTIVE CAPACITY

Climate-Risk Vulnerability assessment (CRVA)

Source: Palao, et.al. 2017. A CRVA for the AMIA program in the Philippines



CLIMATE SENSITIVITY ANALYSIS PER PROVINCE



DATA NEEDED FOR SENSITIVITY ANALYSIS

- 1) CROP OCCURRENCE DATA
 - 2) CLIMATE PROJECTION (Temperature -11 and Precipitation-10)
- *2030 and 2050 projections based on the WorldClim Global Climate Model

MaxEnt Model – the model used to analyze climate sensitivity of a particular crop based on crop occurrence and climate projection

DATA COLLECTION FOR CROP OCCURENCE

PROVINCE	CROP OCCURRENCE	Municipality without crop occurrence data
SOUTHERN LEYTE	100 %	
BILIRAN	100 %	
NORTHERN SAMAR	88 %	Capul, Gamay, San Vicente
EASTERN SAMAR	96 %	Jipapad

CROP OCCURRENCE DATA COLLECTED PER PROVINCE

BILIRAN PROVINCE

1. ABACA
2. BANANA
3. CACAO
4. CASSAVA
5. COFFEE
6. GABI
7. GINGER
8. IRRIGATED RICE
9. JACKFRUIT
10. MAIZE
11. NAPIER
12. PAKBET VEGETABLES
13. PEANUT
14. PINEAPPLE
15. RAINFED RICE
16. SWEET POTATO
17. TRICHANTHERA
18. UPLAND RICE
19. YAUTIA

SOUTHERN LEYTE

1. ABACA
2. BANANA
3. CACAO
4. CASSAVA
5. COFFEE
6. GABI
7. GINGER
8. IRRIGATED RICE
9. JACKFRUIT
10. MAIZE
11. MANGO
12. MONGO
13. NAPIER
14. PAKBET VEGETABLES
15. PALAWAN
16. PEANUT
17. PILI
18. PINEAPPLE
19. RAINFED RICE
20. SWEET POTATO
21. TRICHANTHERA
22. UPLAND RICE
23. YAUTIA

NORTHERN SAMAR

1. ABACA
2. BANANA
3. BANGUS
4. CACAO
5. CASSAVA
6. COFFEE
7. GABI
8. GINGER
9. IRRIGATED RICE
10. JACKFRUIT
11. LANSONES
12. MAIZE
13. MONGO
14. NAPIER
15. PAKBET VEGETABLES
16. PALAWAN
17. PEANUT
18. PILI
19. PINEAPPLE
20. RAINFED RICE
21. SEaweEDS
22. SWEET POTATO
23. TRICHANTHERA
24. UPLAND RICE
25. YAUTIA

EASTERN SAMAR

1. ABACA
2. BANANA
3. CACAO
4. CASSAVA
5. COFFEE
6. GABI
7. GINGER
8. HOT PEPPER
9. IRRIGATED RICE
10. JACKFRUIT
11. KALABO
12. LANSONES
13. MAIZE
14. MANGO
15. MONGO
16. NAPIER
17. PAKBET VEGETABLES
18. PALAWAN
19. PEANUT
20. PINEAPPLE
21. RAINFED RICE
22. RAMBUTAN
23. SWEET POTATO
24. UPLAND RICE

CLIMATE SENSITIVITY ANALYSIS PER PROVINCE

Exposure I: changes in temp. and prec.

Future conditions (GCMs) – Current conditions

Changes in
temperature

Changes in
precipitation

Changes in climatic
suitability to grow crops

Sensitivity Index

Future conditions (GCMs) – Current conditions

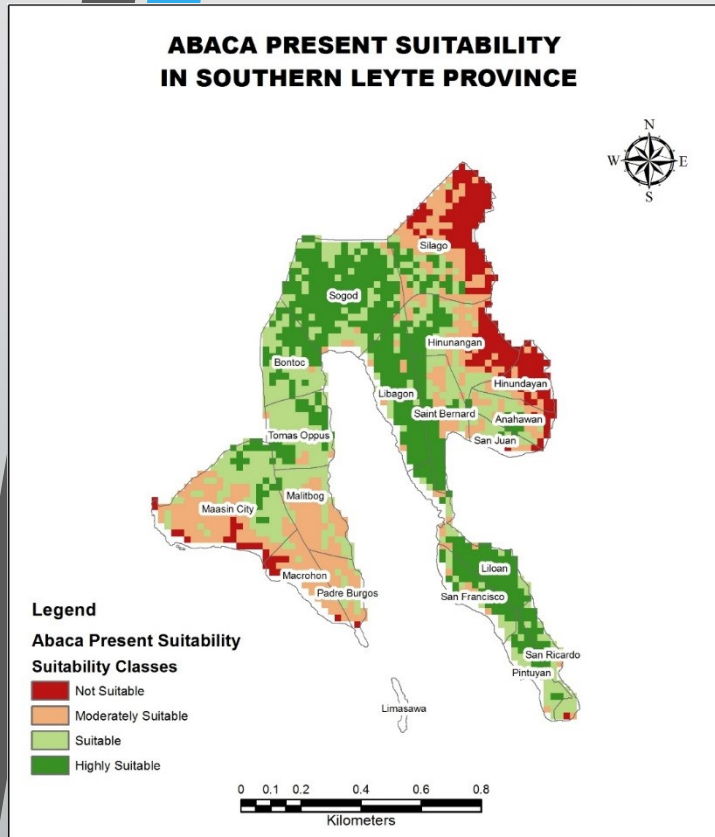
CROPS WITH SENSITIVITY ANALYSIS

1. ABACA
2. BANANA,
3. CACAO,
4. IRRIGATED RICE,
5. CORN,
6. PAKBET,
7. RAINFED RICE,
8. UPLAND RICE

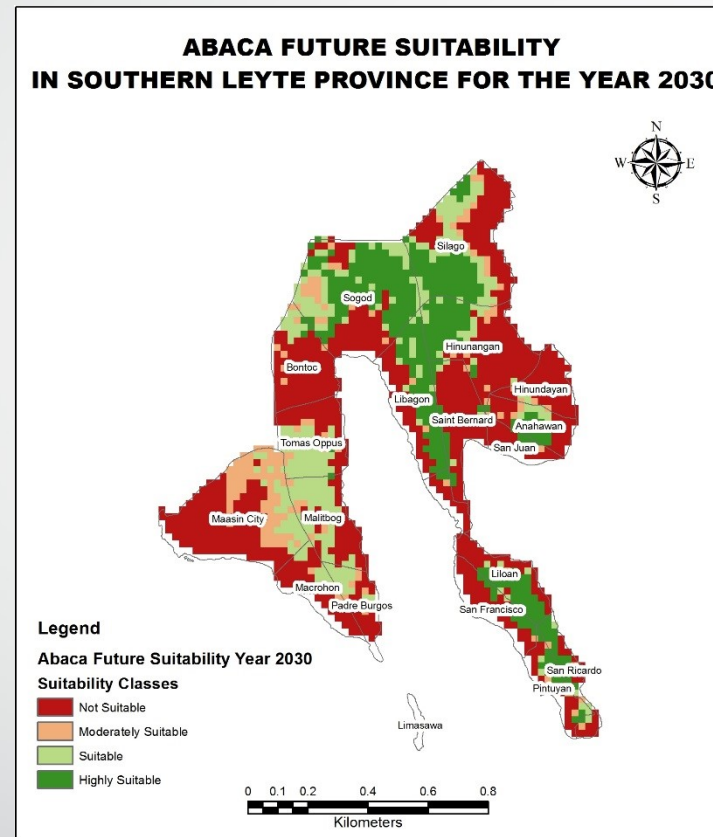


CLIMATE SENSITIVITY BY CROP (PROVINCE OF SOUTHERN LEYTE)

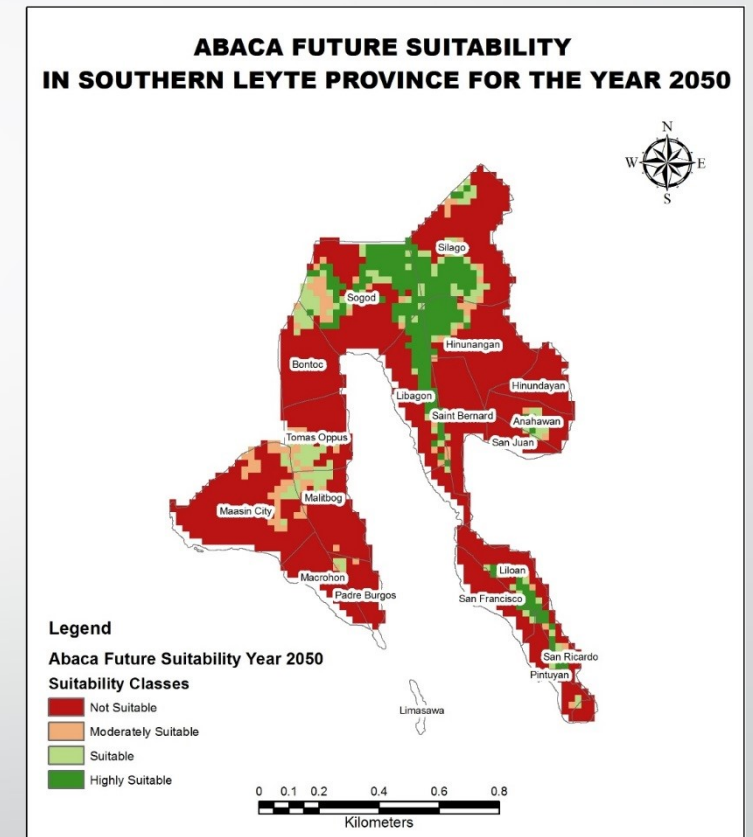
CLIMATE SENSITIVITY OF ABACA (PROVINCE OF SOUTHERN LEYTE)



CURRENT



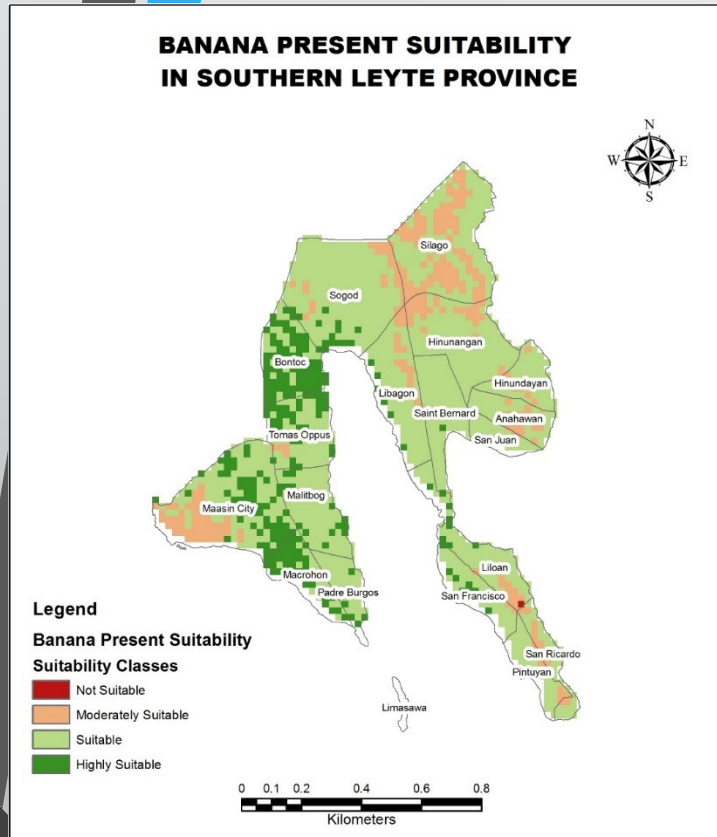
YEAR 2030



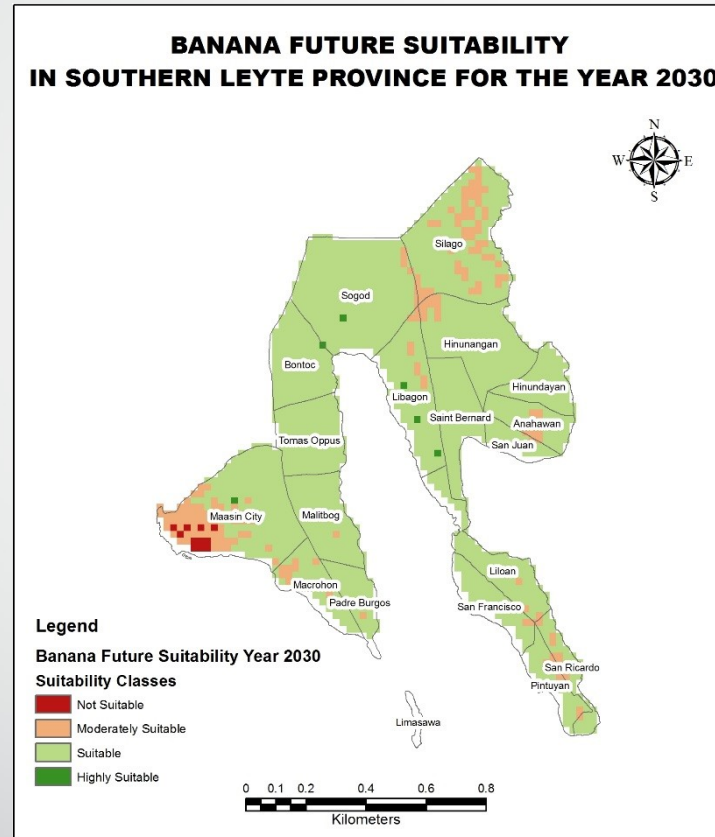
YEAR 2050

Both highly suitable and suitable area for Abaca will decrease in year 2030 and 2050. The remaining suitable areas can be found in higher elevations or mountain ranges.

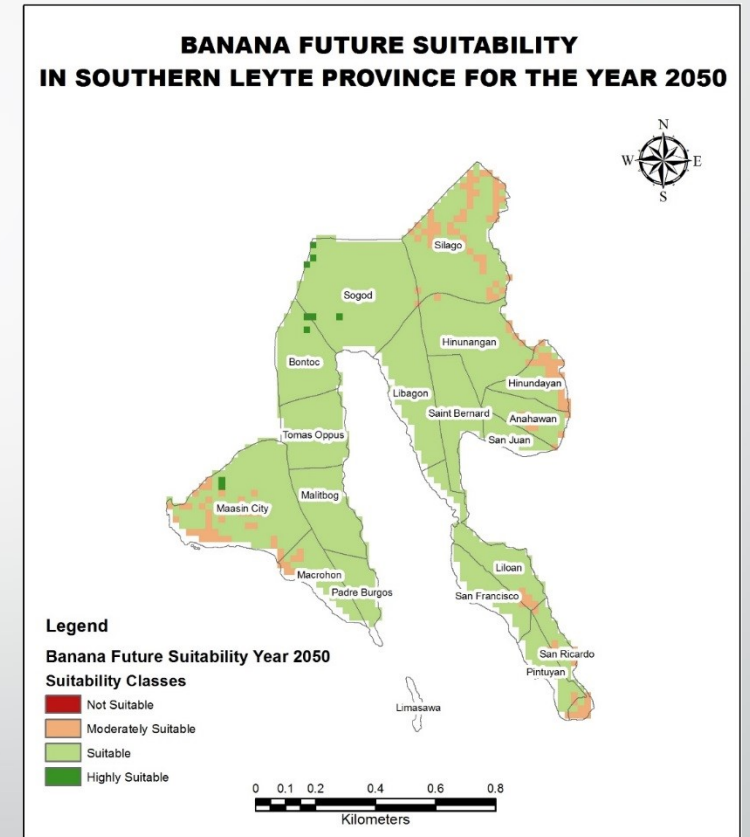
CLIMATE SENSITIVITY OF BANANA (PROVINCE OF SOUTHERN LEYTE)



CURRENT



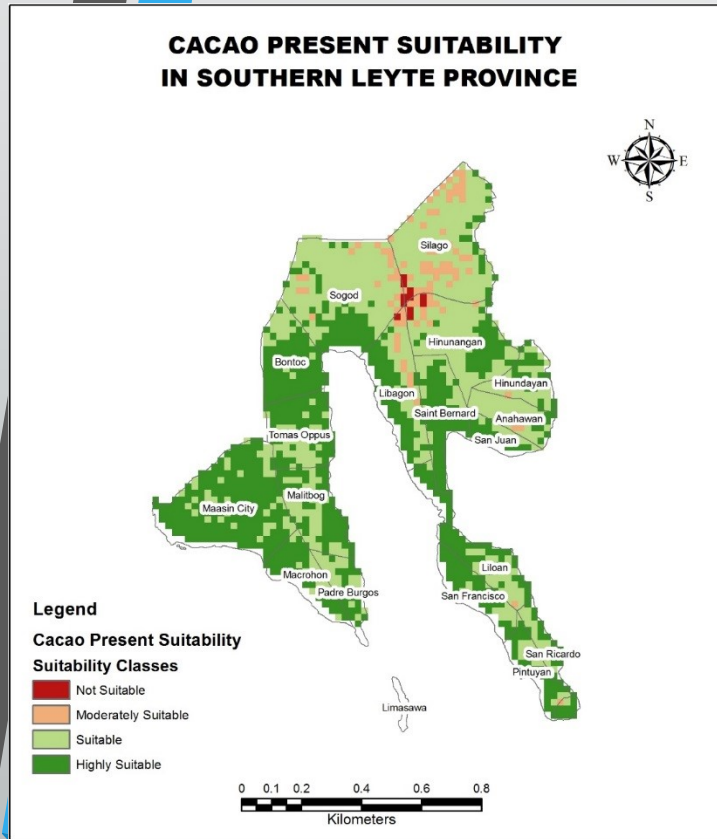
YEAR 2030



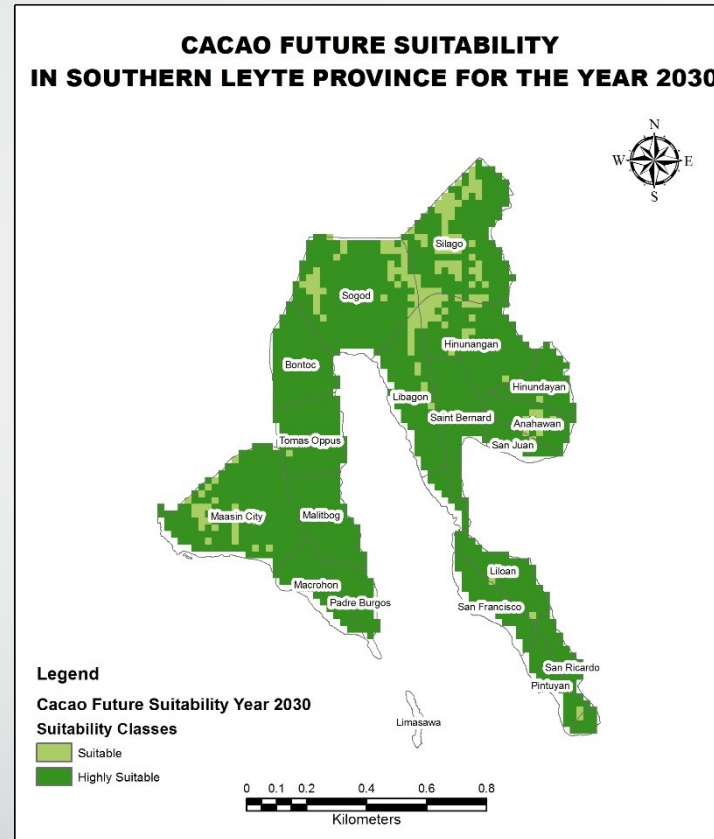
YEAR 2050

Although the highly suitable area for Banana will decrease, most of the municipalities of Southern Leyte will become suitable for Banana in year 2030 and 2050.

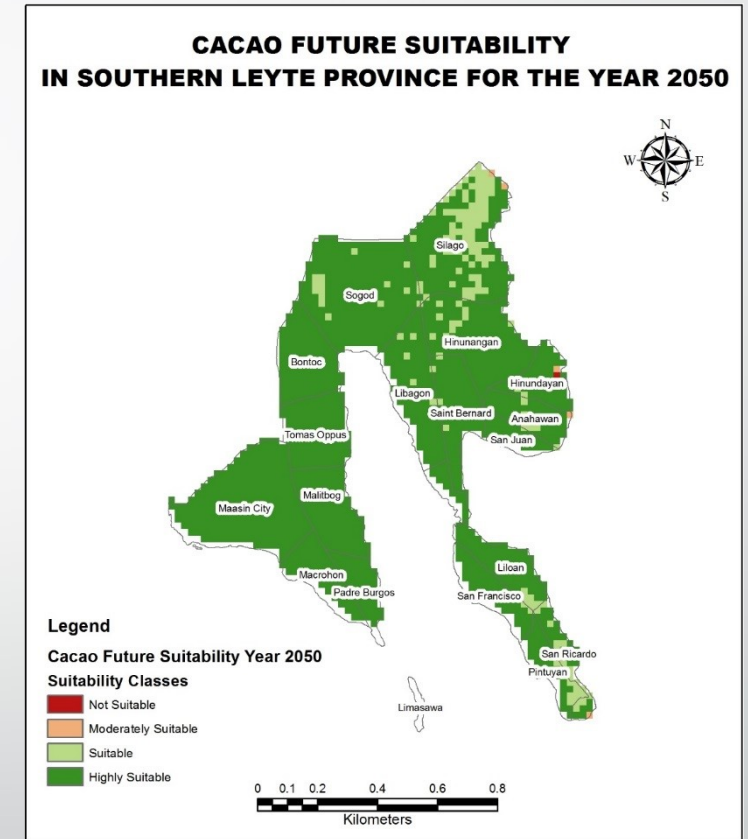
CLIMATE SENSITIVITY OF CACAO (PROVINCE OF SOUTHERN LEYTE)



CURRENT



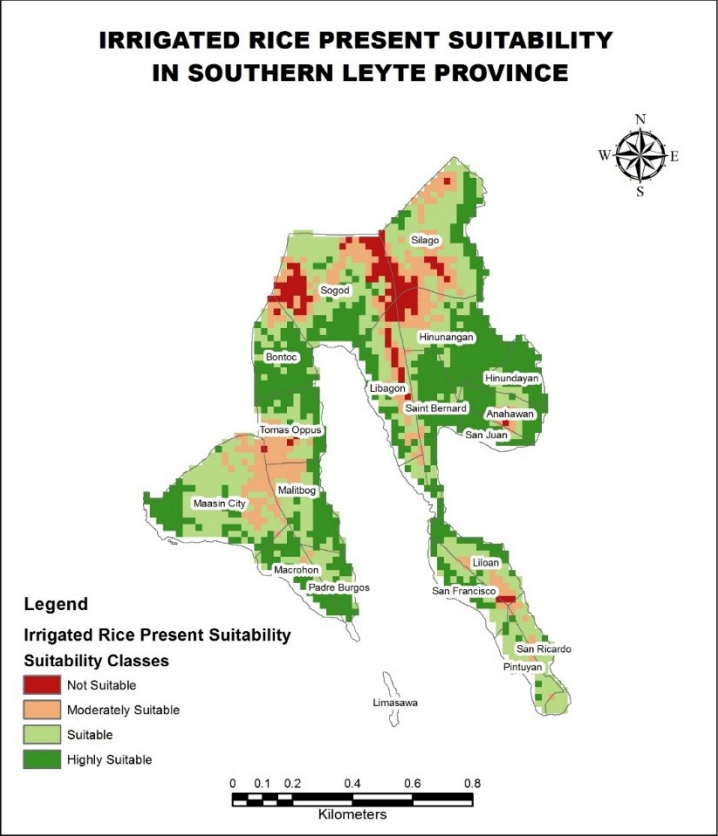
YEAR 2030



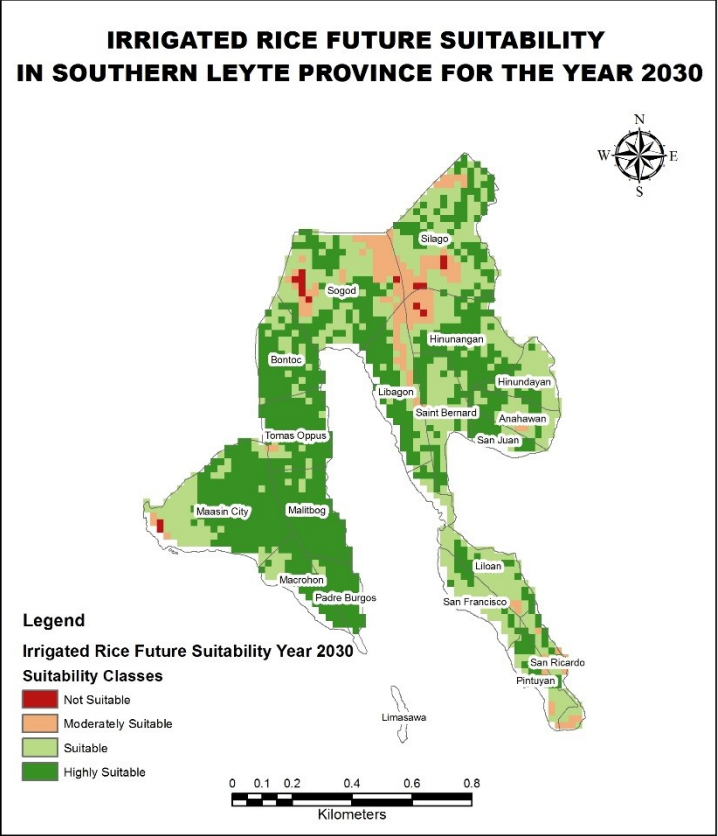
YEAR 2050

Almost the whole province of Southern Leyte will become highly suitable for Cacao in year 2030 and 2050.

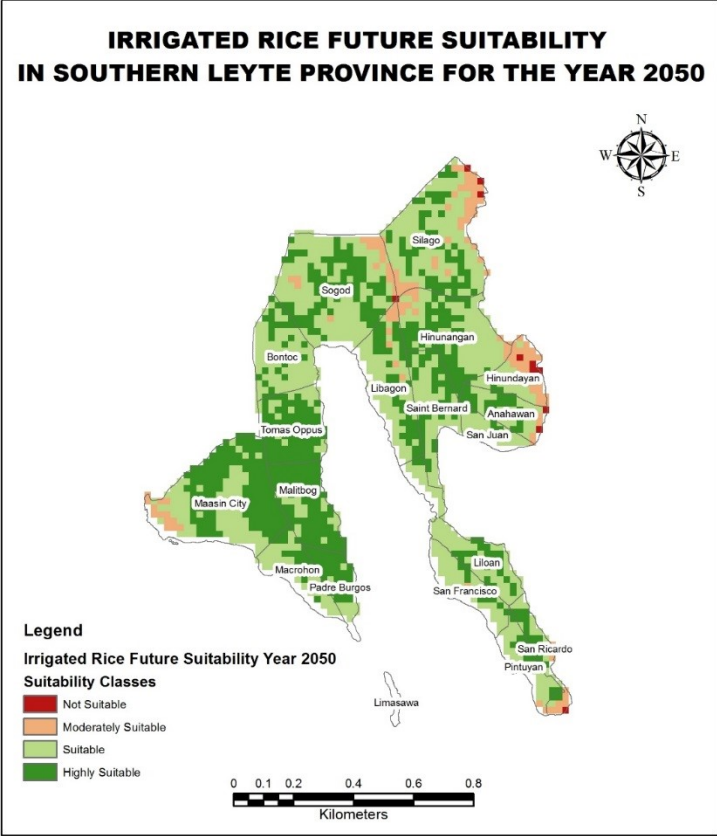
CLIMATE SENSITIVITY OF IRRIGATED RICE (PROVINCE OF SOUTHERN LEYTE)



CURRENT



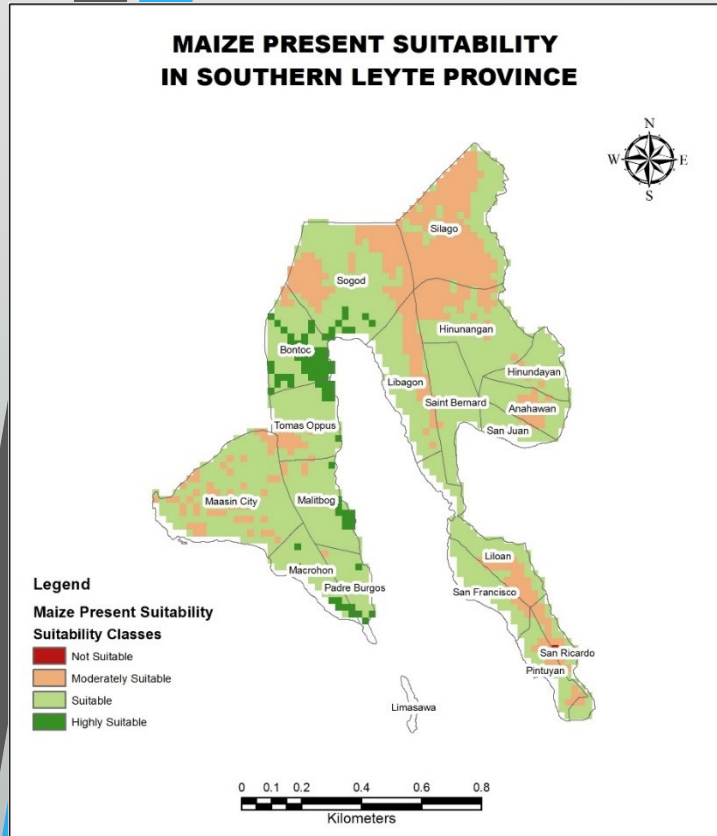
YEAR 2030



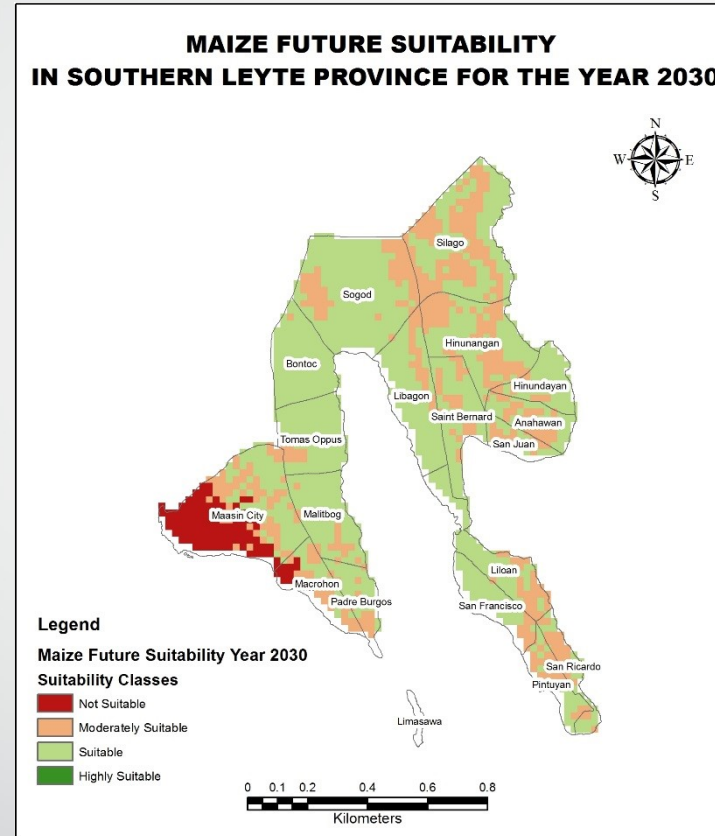
YEAR 2050

The area highly suitable for Irrigated rice will increase in 2030 but will slightly decrease in 2050. Most municipalities of the province however, remains suitable for irrigated rice.

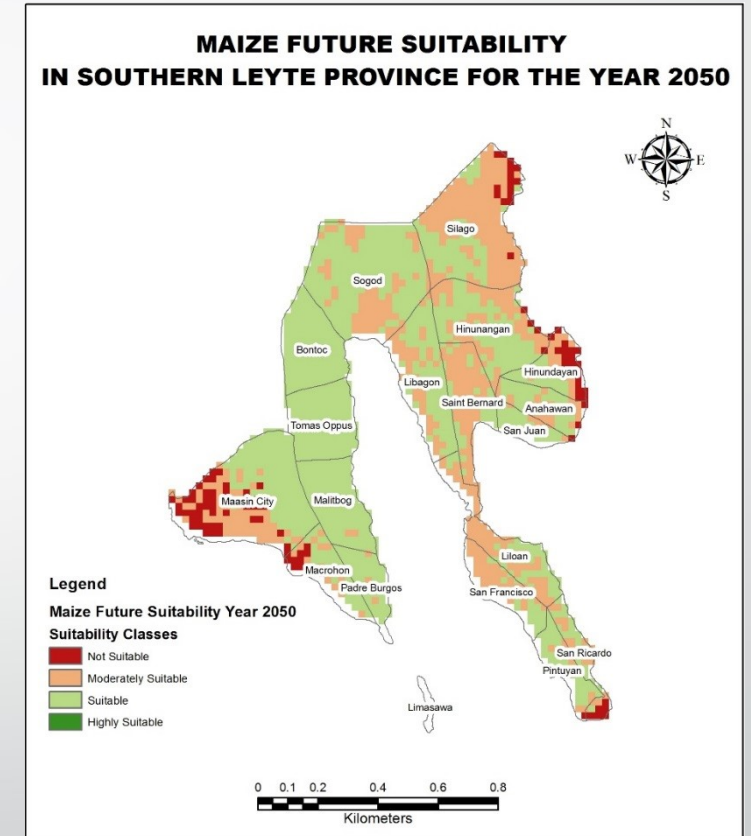
CLIMATE SENSITIVITY OF CORN (PROVINCE OF SOUTHERN LEYTE)



CURRENT



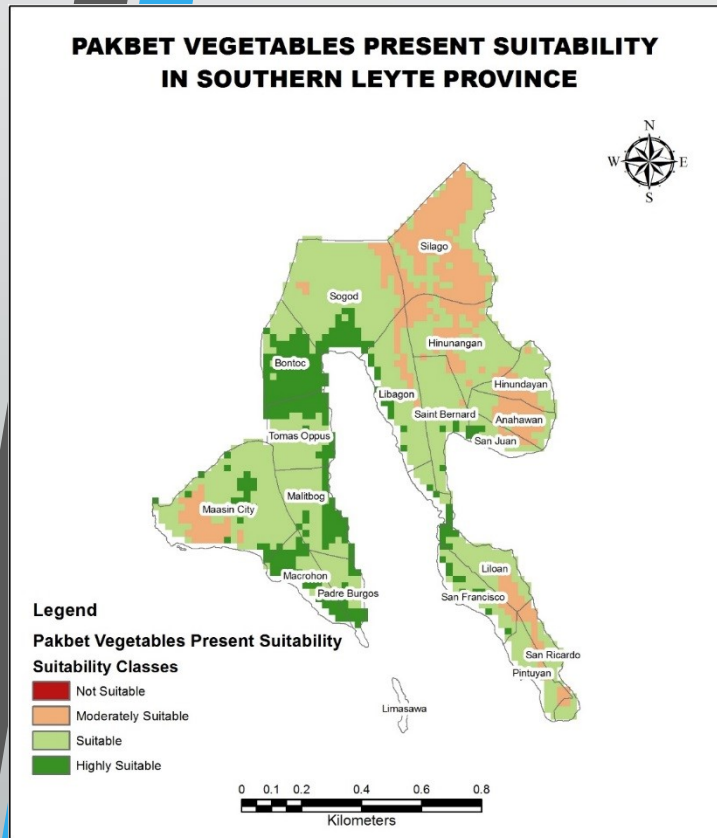
YEAR 2030



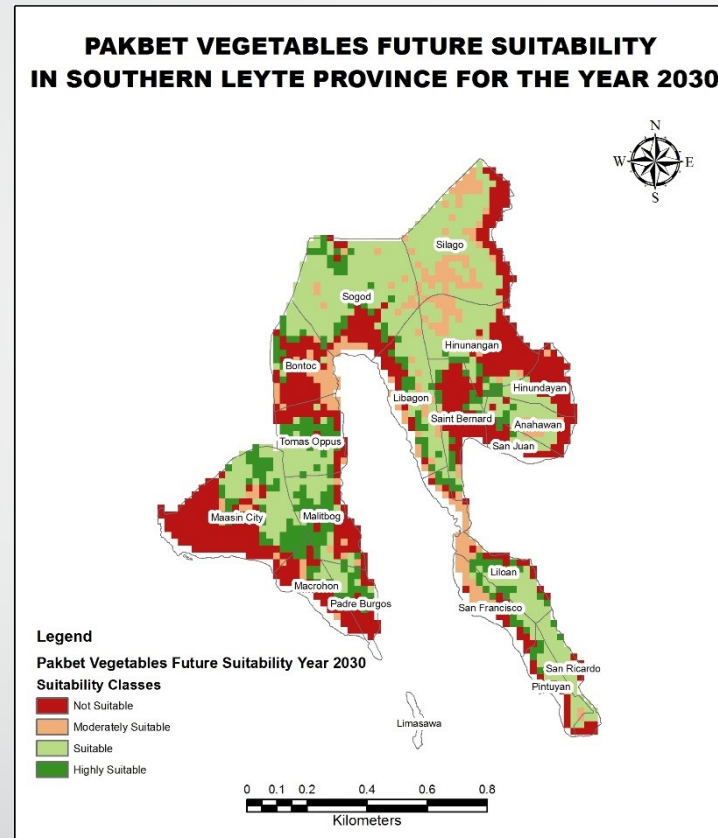
YEAR 2050

The area suitable for Corn will slightly decrease in 2030 and 2050. A small portion along the coastline municipalities will become unsuitable for Corn

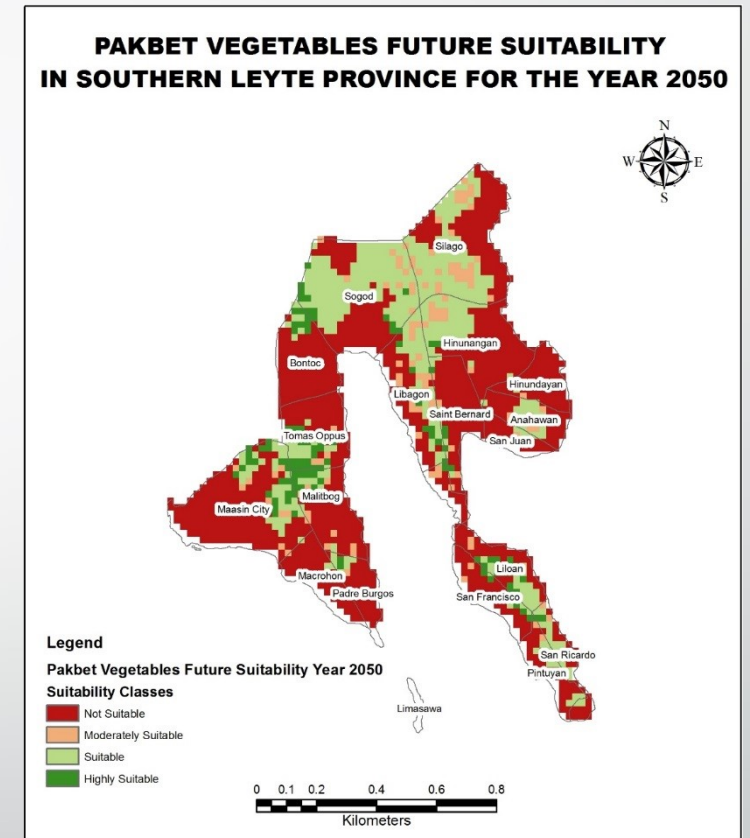
CLIMATE SENSITIVITY OF PAKBET (PROVINCE OF SOUTHERN LEYTE)



CURRENT



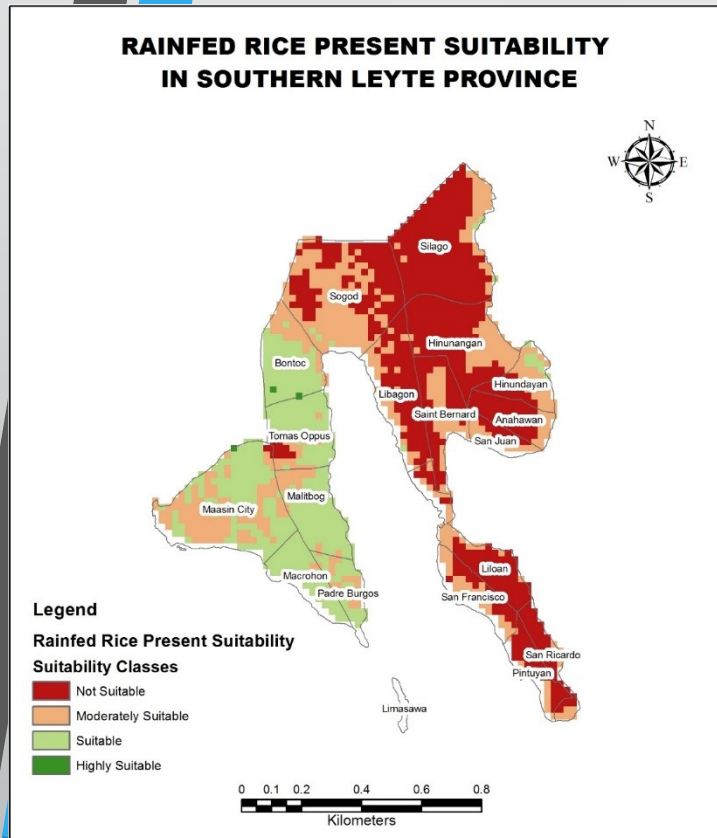
YEAR 2030



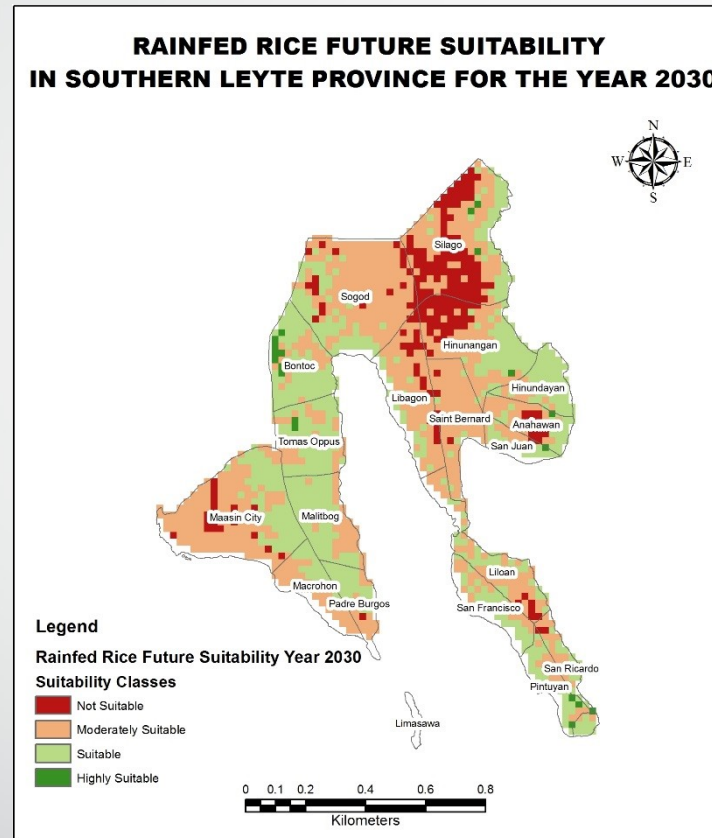
YEAR 2050

The area suitable for Pakbet will decrease in 2030 and 2050. A small portion, mostly located in higher elevations, like mountains ranges, will remain suitable for Pakbet.

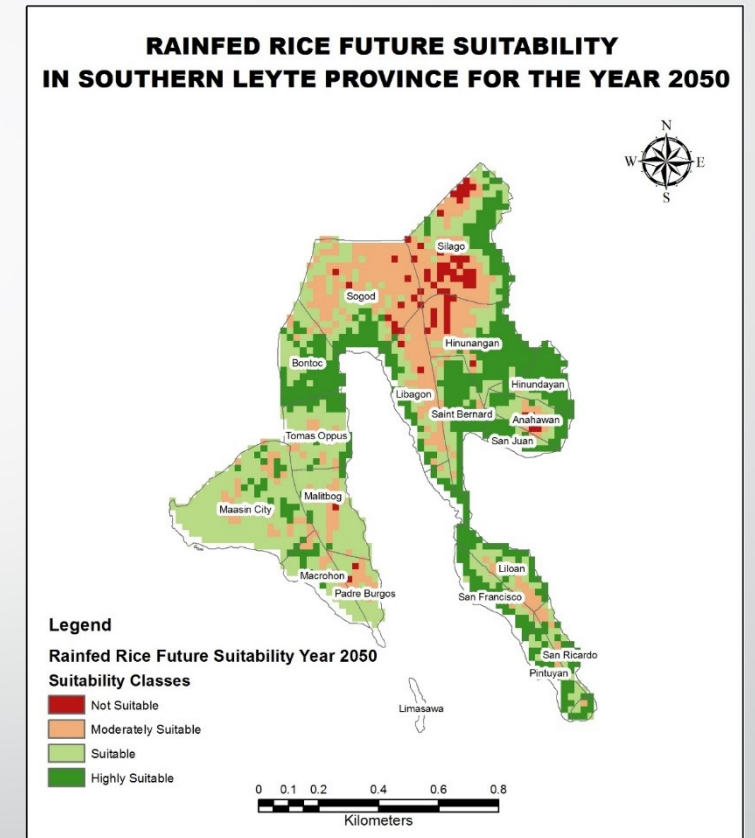
CLIMATE SENSITIVITY OF RAINFED RICE (PROVINCE OF SOUTHERN LEYTE)



CURRENT



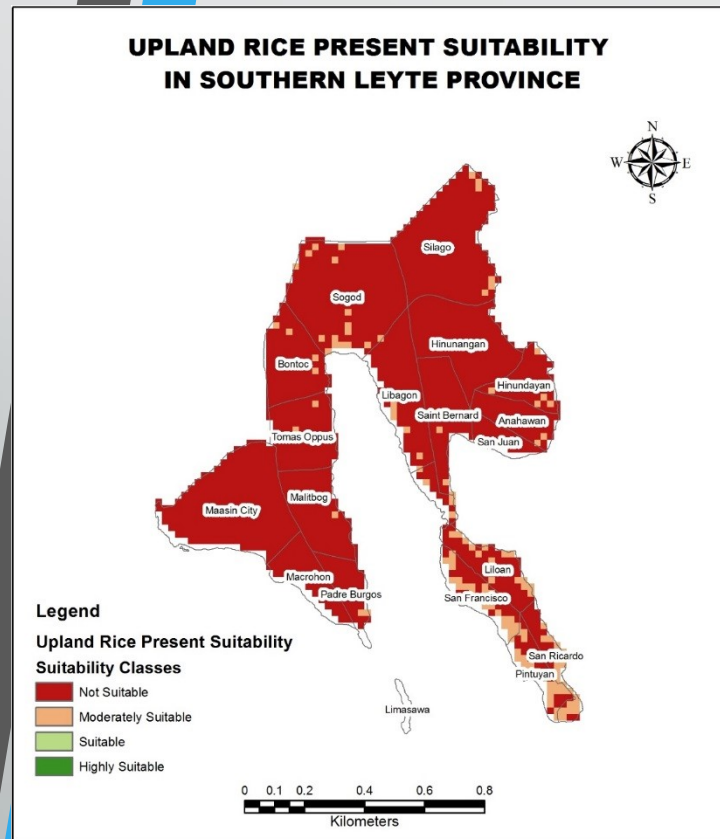
YEAR 2030



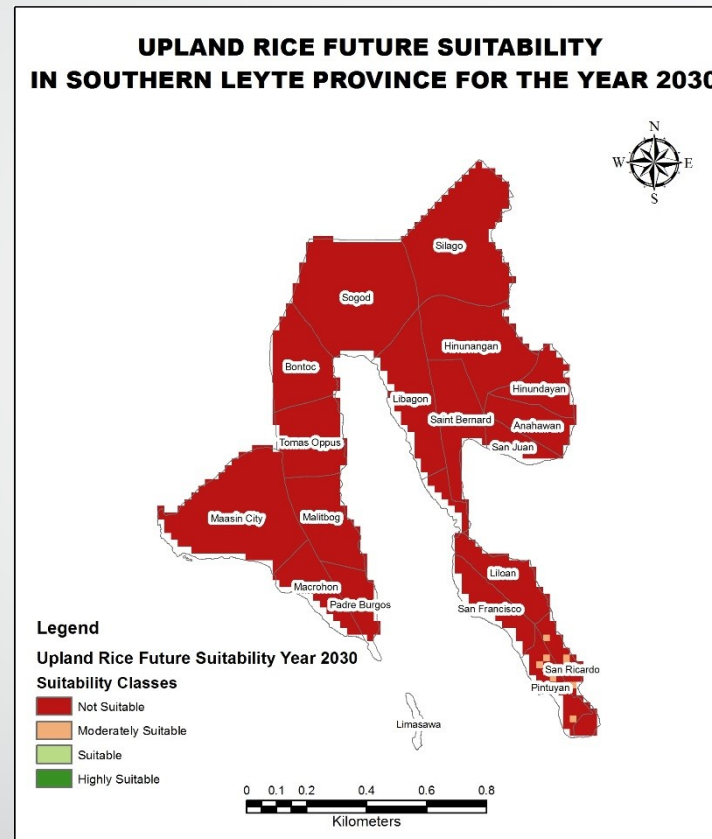
YEAR 2050

The area highly suitable and suitable for Rainfed rice will increase in 2030 and 2050.

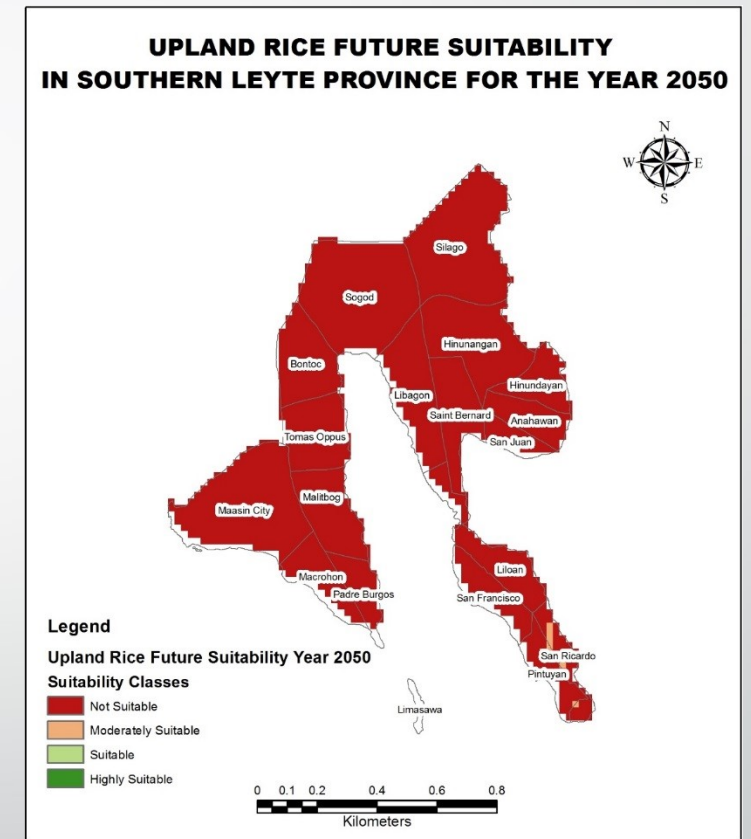
CLIMATE SENSITIVITY OF UPLAND RICE (PROVINCE OF SOUTHERN LEYTE)



CURRENT



YEAR 2030



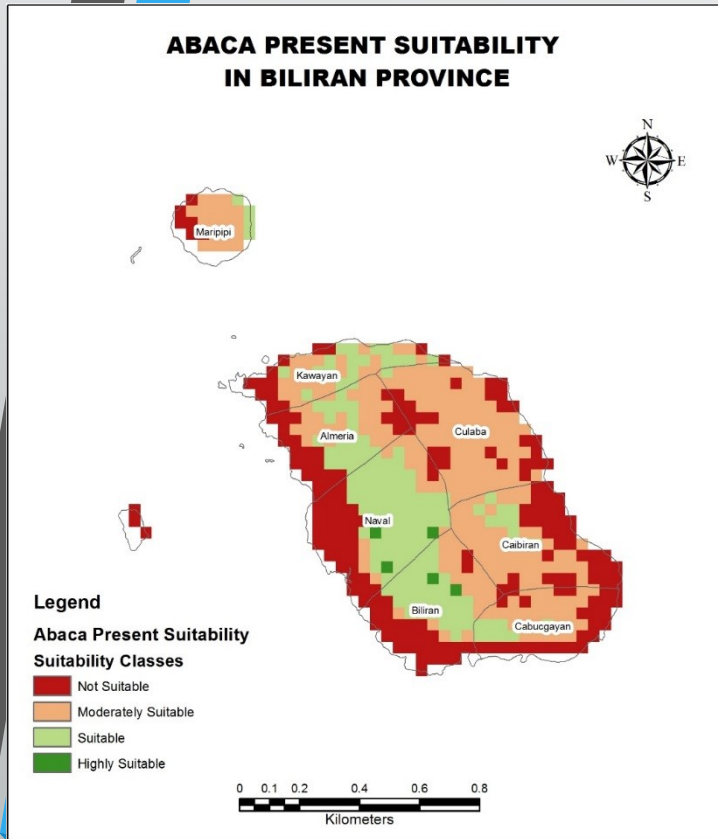
YEAR 2050

The whole province of Southern Leyte will become unsuitable to Upland rice in 2030 and 2050.

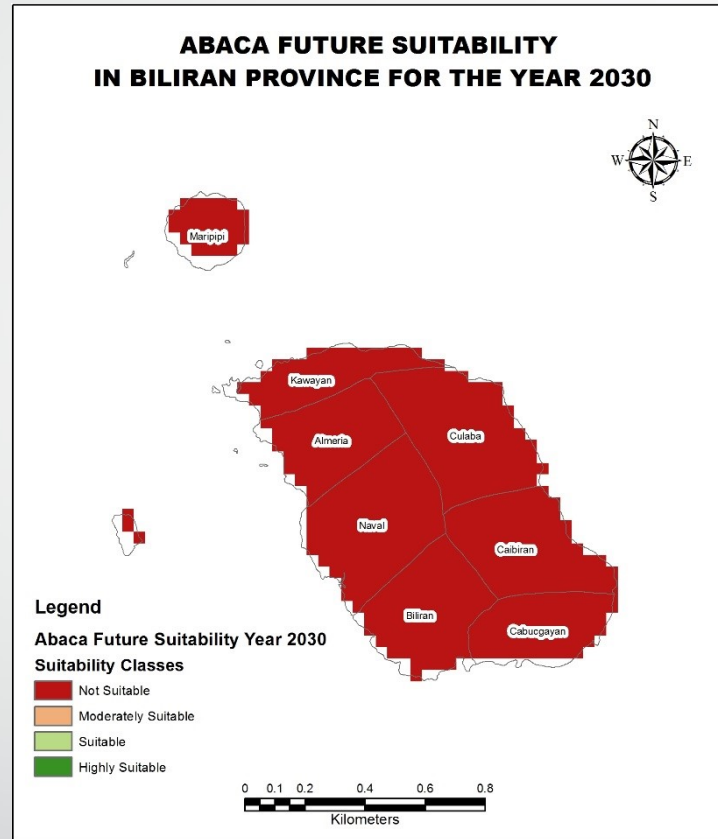


CLIMATE SENSITIVITY BY CROP (PROVINCE OF BILIRAN)

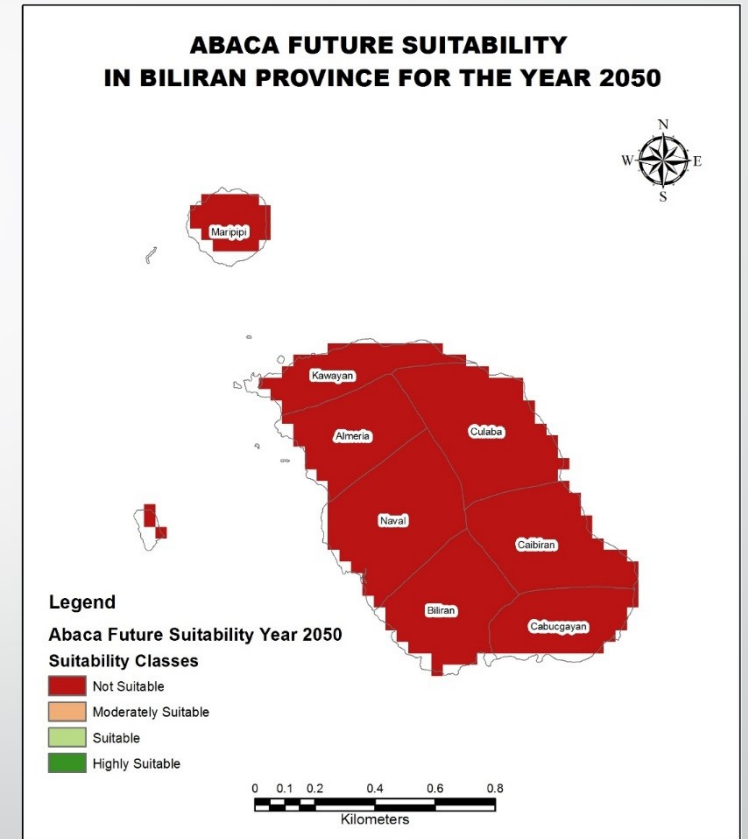
CLIMATE SENSITIVITY OF ABACA (PROVINCE OF BILIRAN)



CURRENT



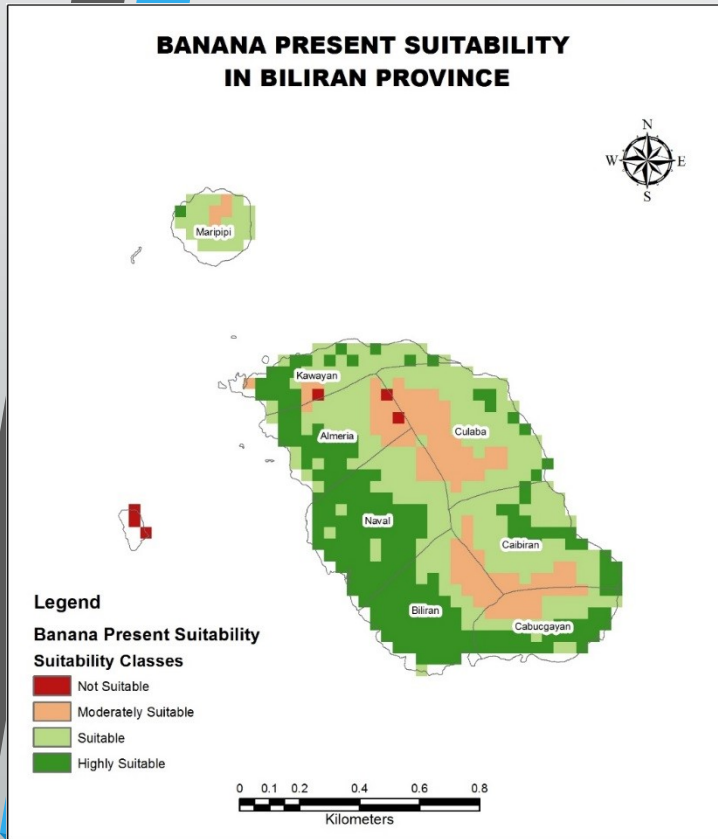
YEAR 2030



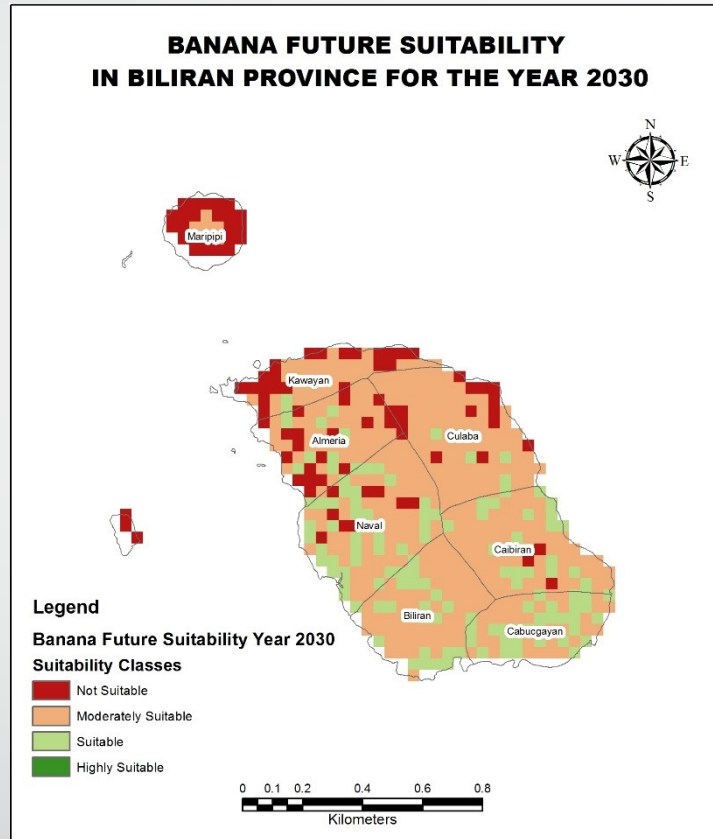
YEAR 2050

The whole province of Biliran will become unsuitable to Abaca in 2030 and 2050.

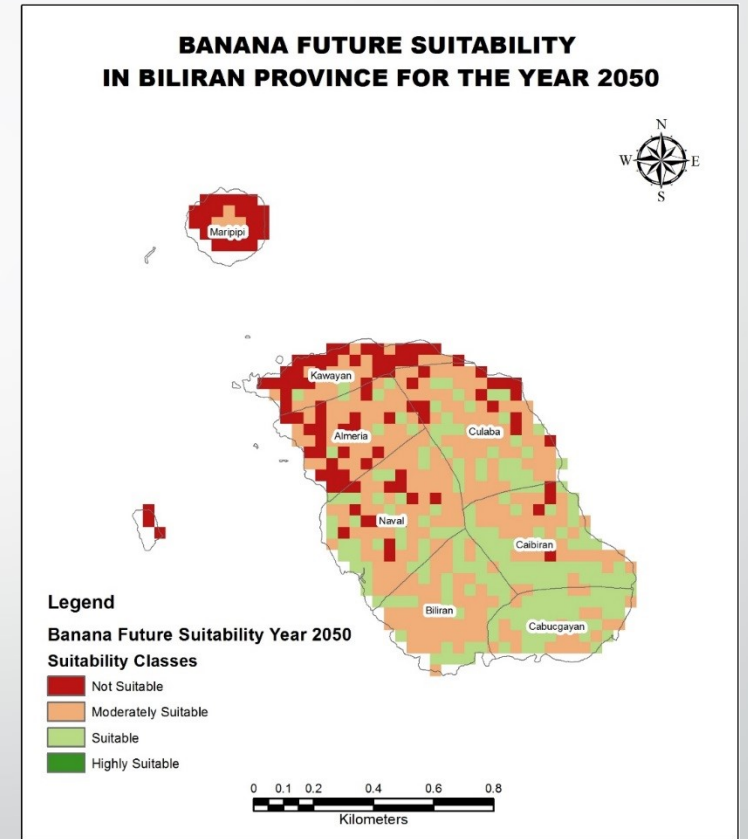
CLIMATE SENSITIVITY OF BANANA (PROVINCE OF BILIRAN)



CURRENT



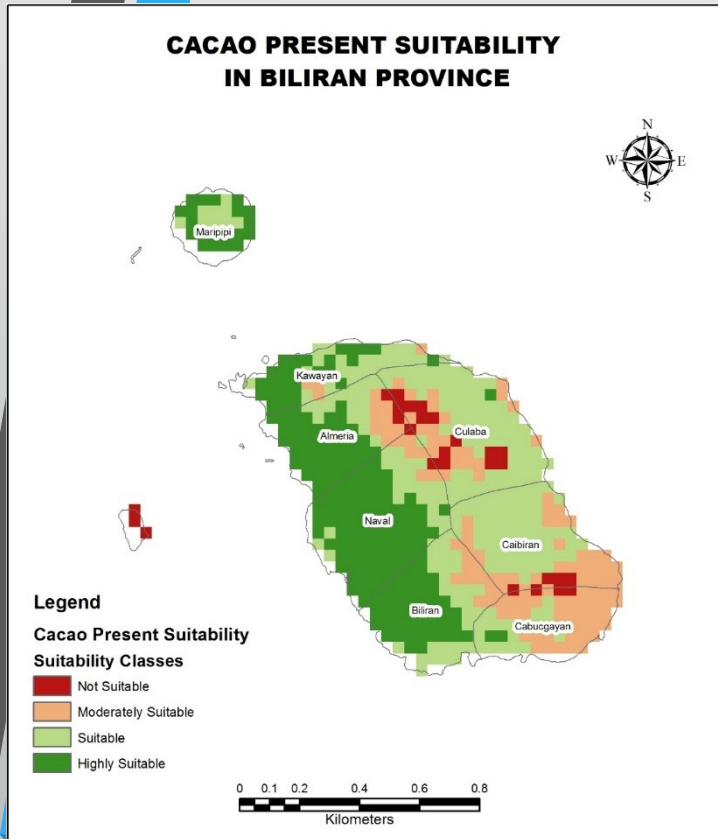
YEAR 2030



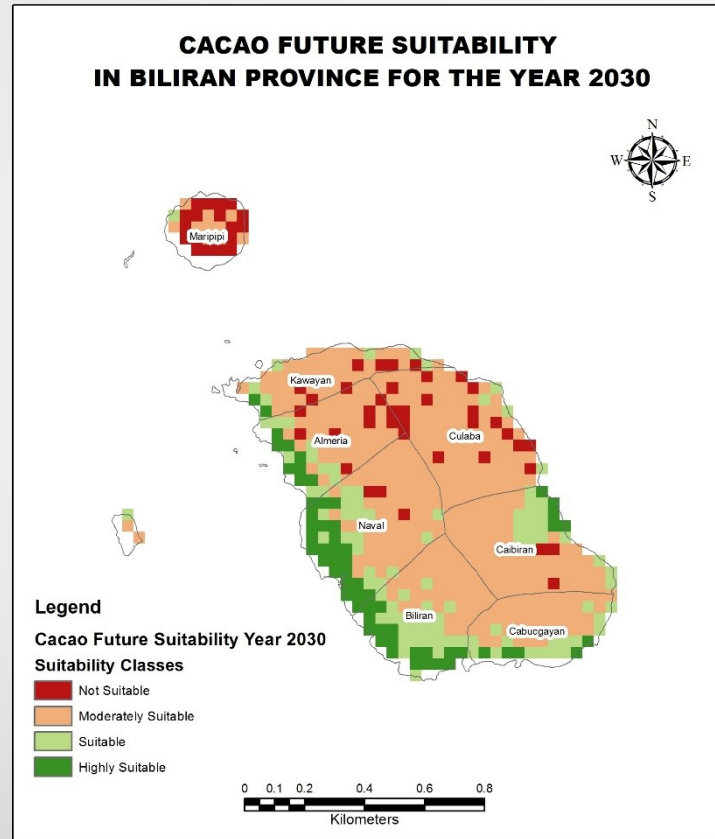
YEAR 2050

All highly suitable area for Banana will be gone and only patches of suitable areas will remain and mostly found in the Southern half of the Island in year 2030 and 2050.

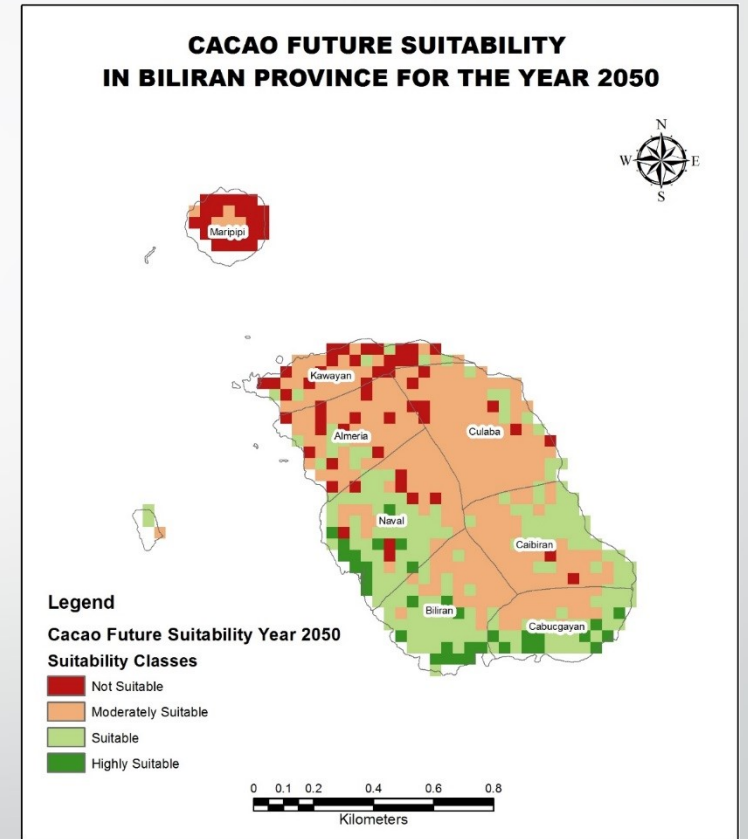
CLIMATE SENSITIVITY OF CACAO (PROVINCE OF BILIRAN)



CURRENT



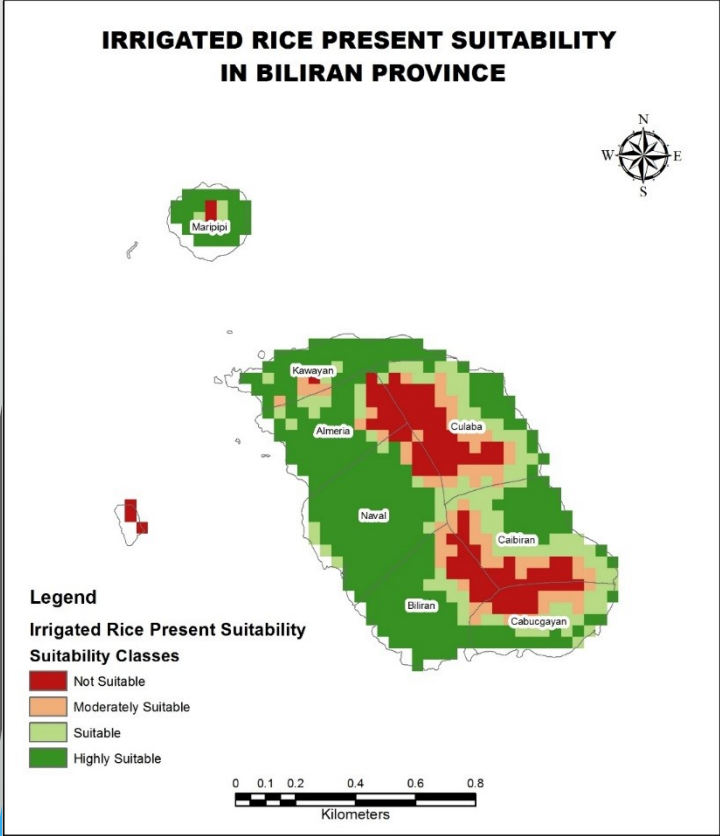
YEAR 2030



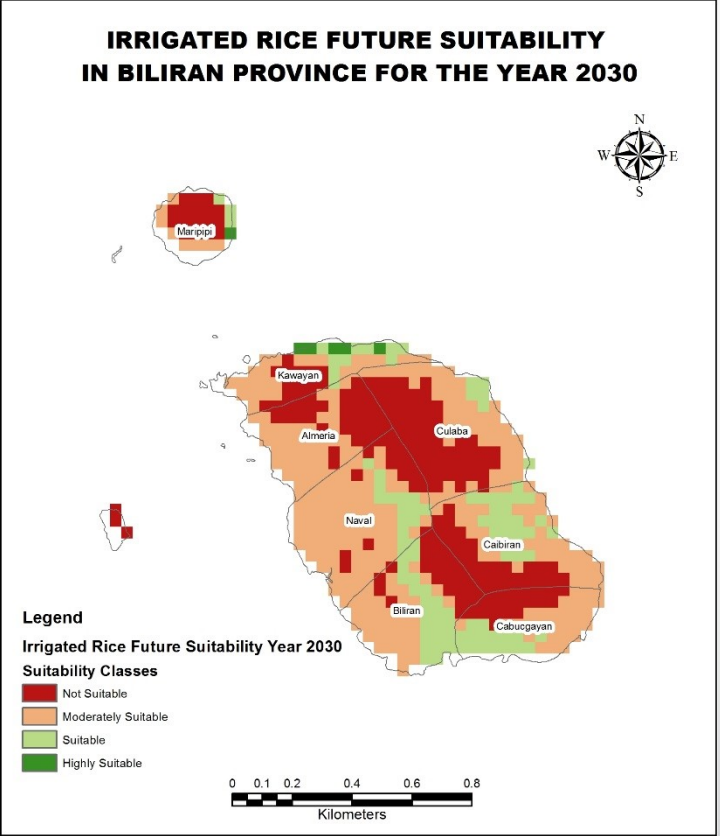
YEAR 2050

The highly suitable area for Cacao will decrease in year 2030 and 2050 and mostly found along the coastline of the southern half of the island.

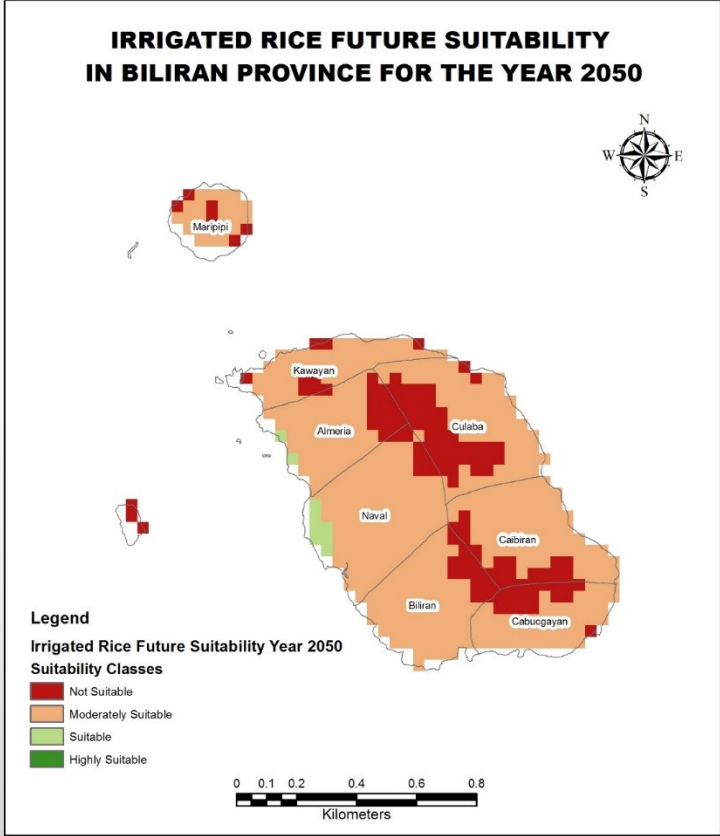
CLIMATE SENSITIVITY OF IRRIGATED RICE (PROVINCE OF BILIRAN)



CURRENT



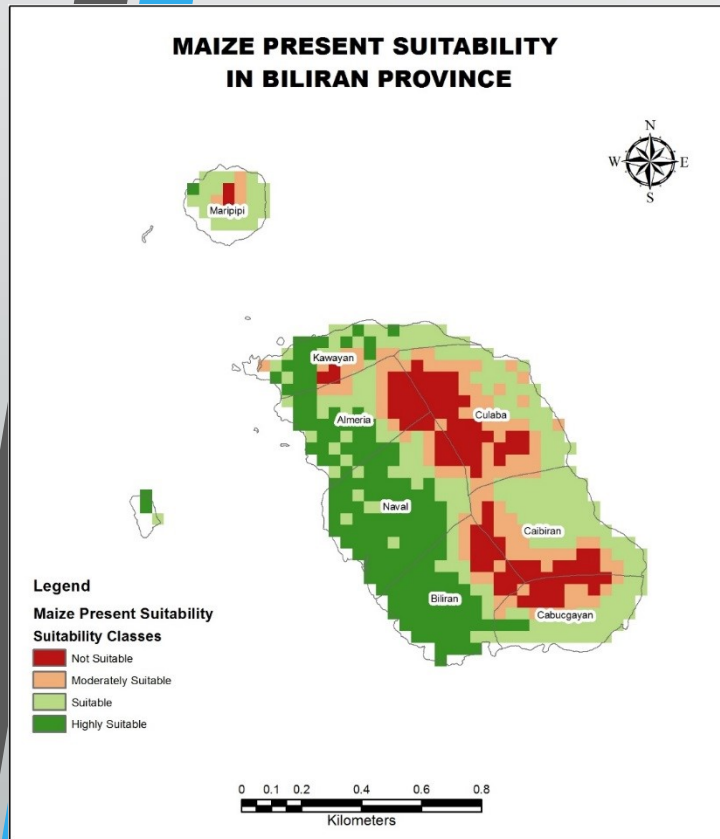
YEAR 2030



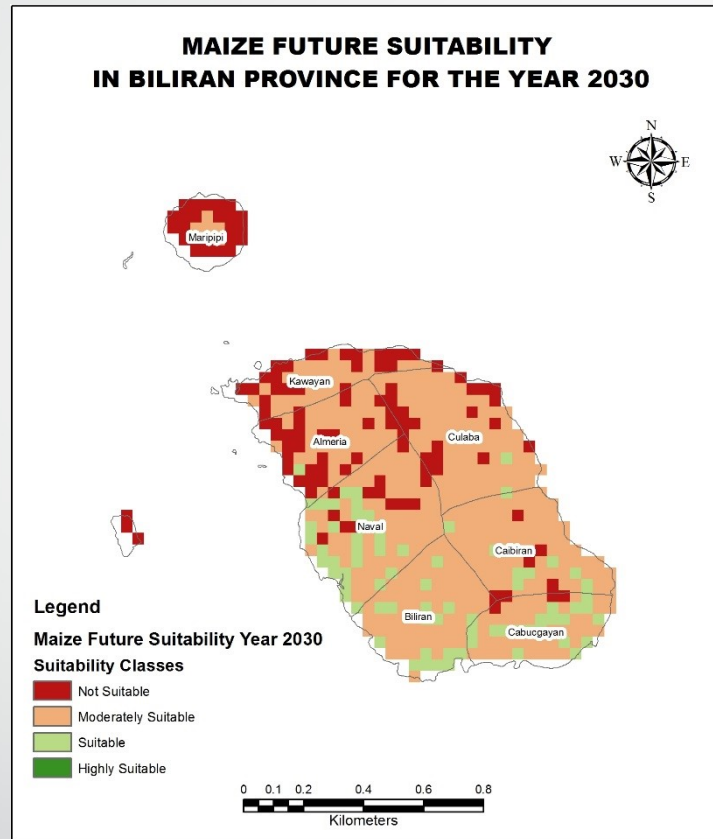
YEAR 2050

All highly suitable area for Irrigated rice will be gone in year 2030 and 2050.

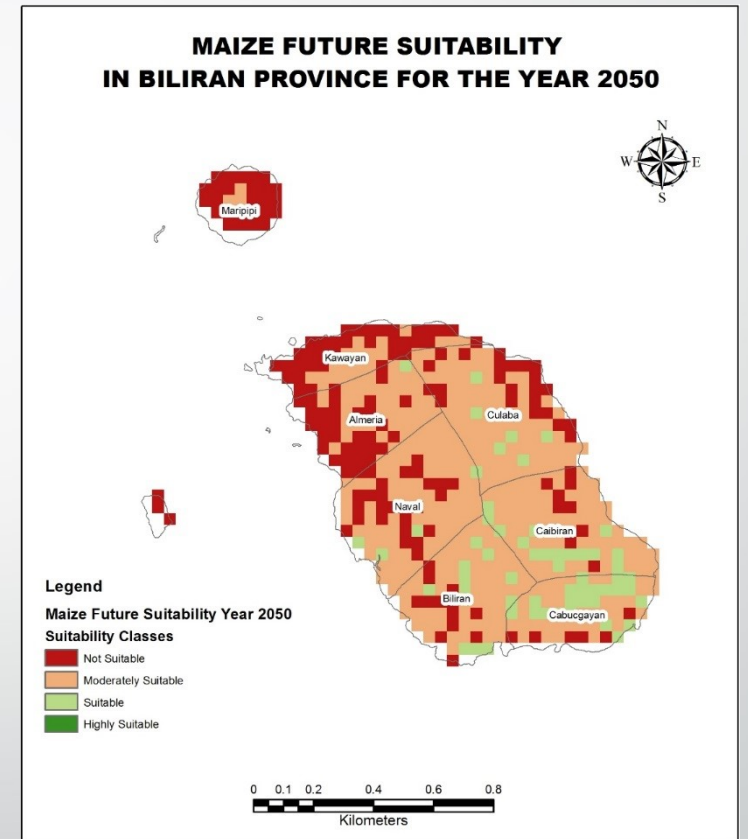
CLIMATE SENSITIVITY OF CORN (PROVINCE OF BILIRAN)



CURRENT



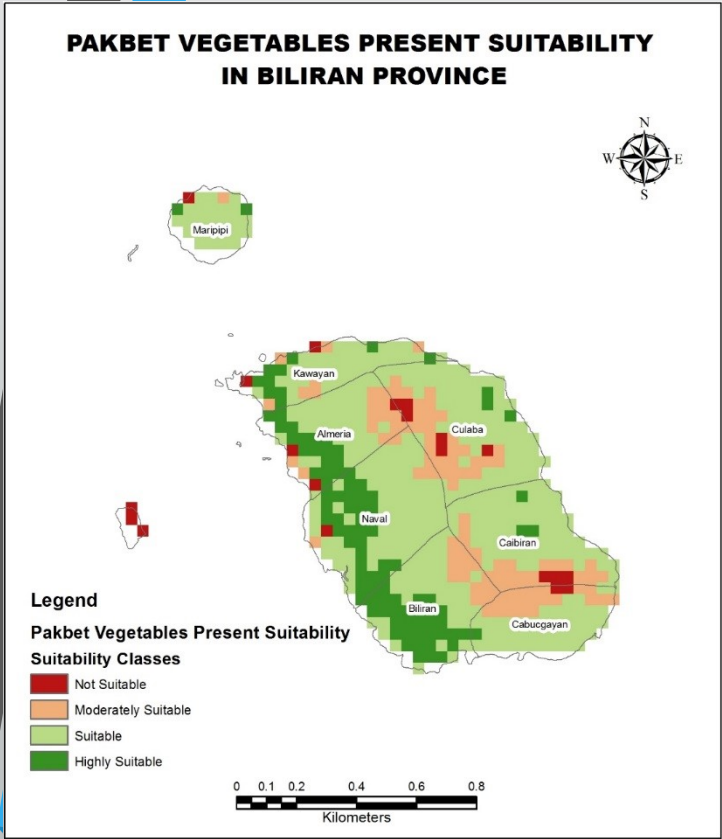
YEAR 2030



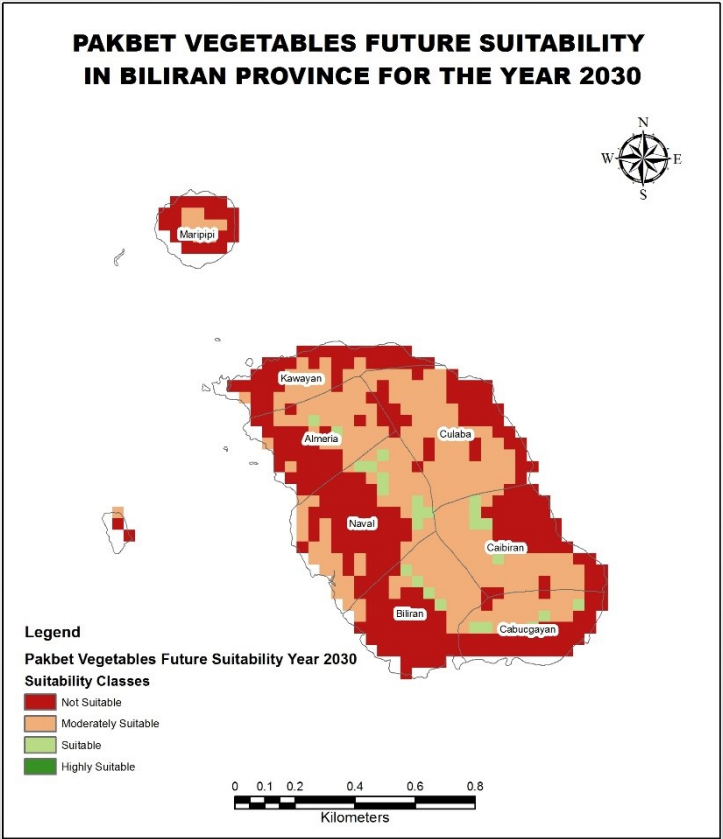
YEAR 2050

The highly suitable area for Corn will be gone in year 2030 and 2050 and only small patches of suitable areas remains that mostly found at the southern half of the island.

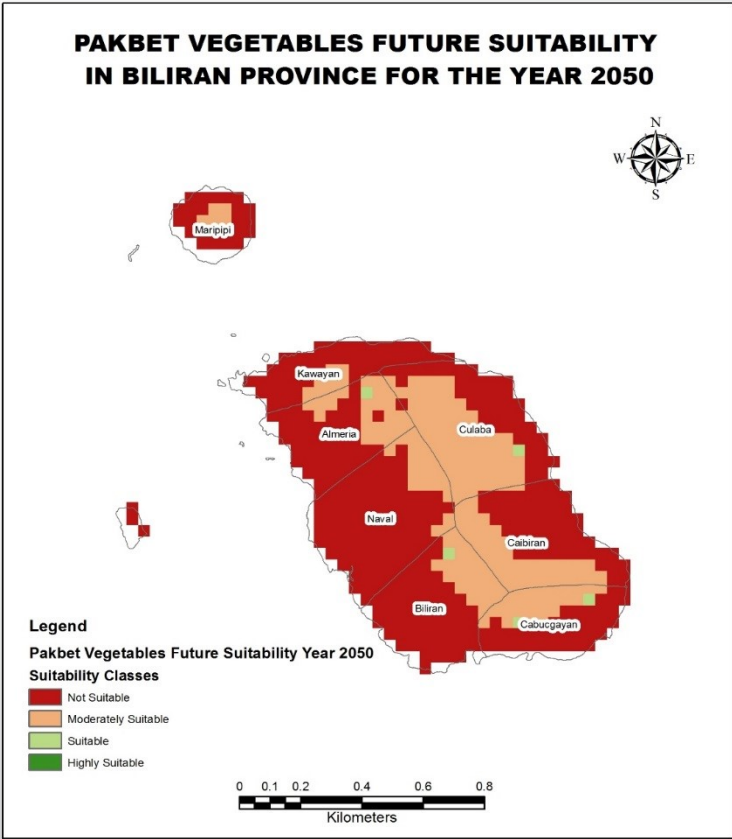
CLIMATE SENSITIVITY OF PAKBET (PROVINCE OF BILIRAN)



CURRENT



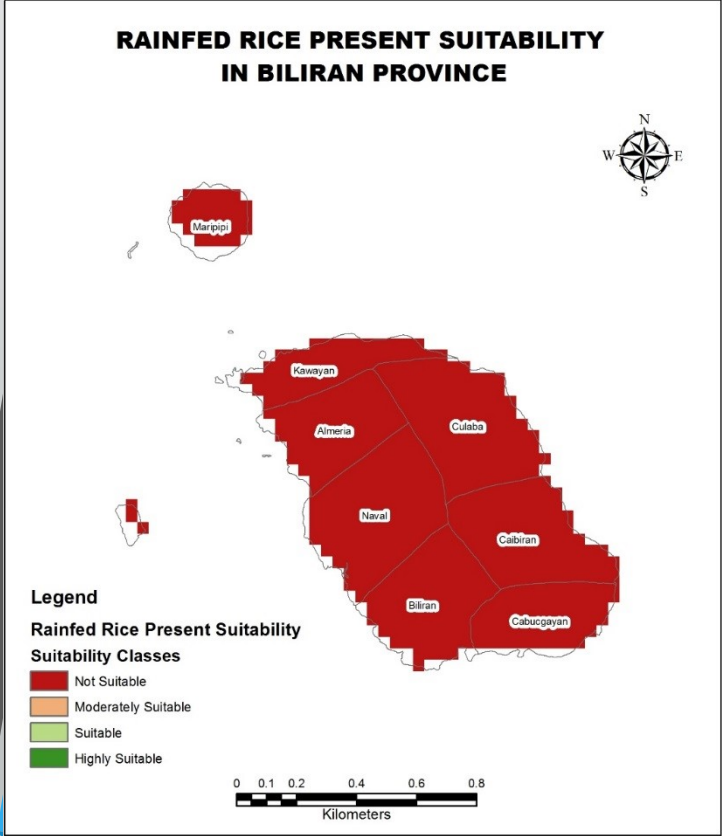
YEAR 2030



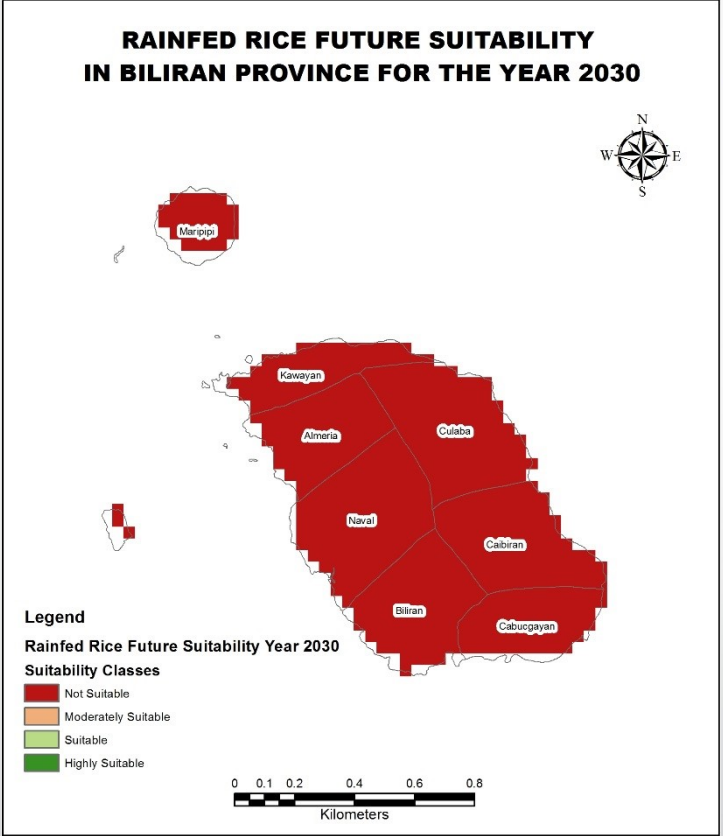
YEAR 2050

All highly suitable and suitable areas for Pakbet will be gone in year 2030 and 2050.

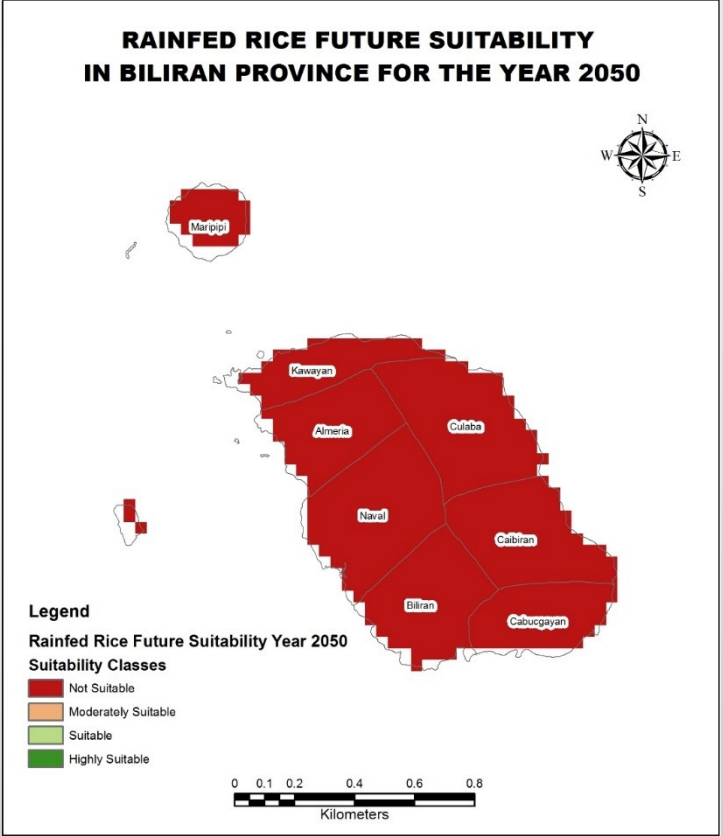
CLIMATE SENSITIVITY OF RAINFED RICE (PROVINCE OF BILIRAN)



CURRENT



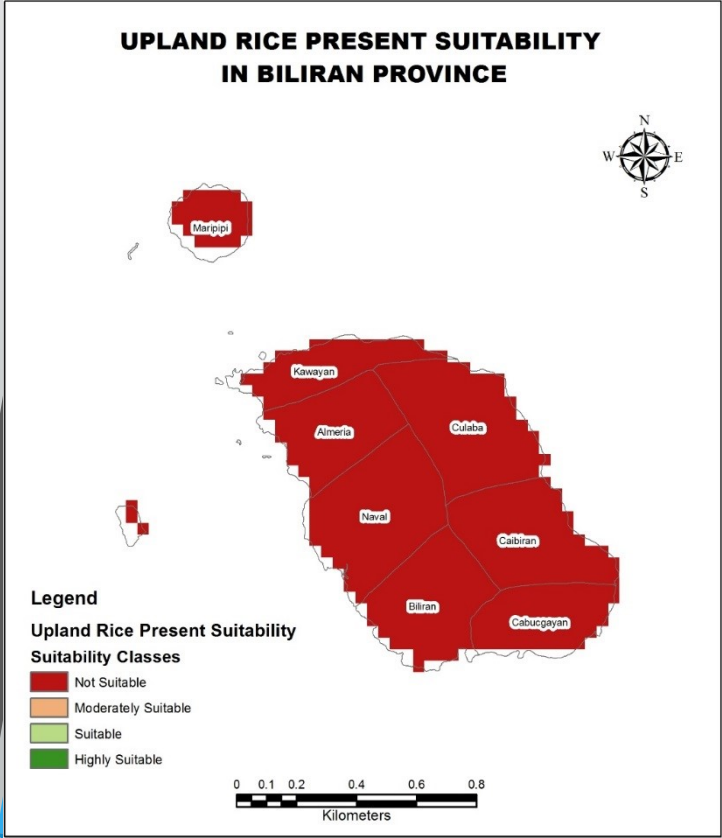
YEAR 2030



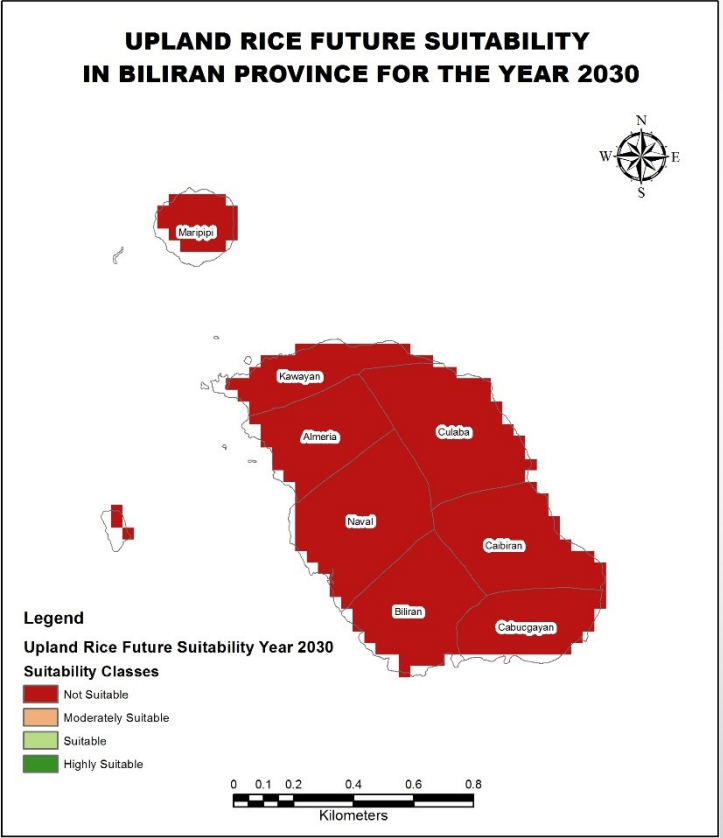
YEAR 2050

There will be no area suitable for Rainfed rice in year 2030 and 2050 in the whole province of Biliran.

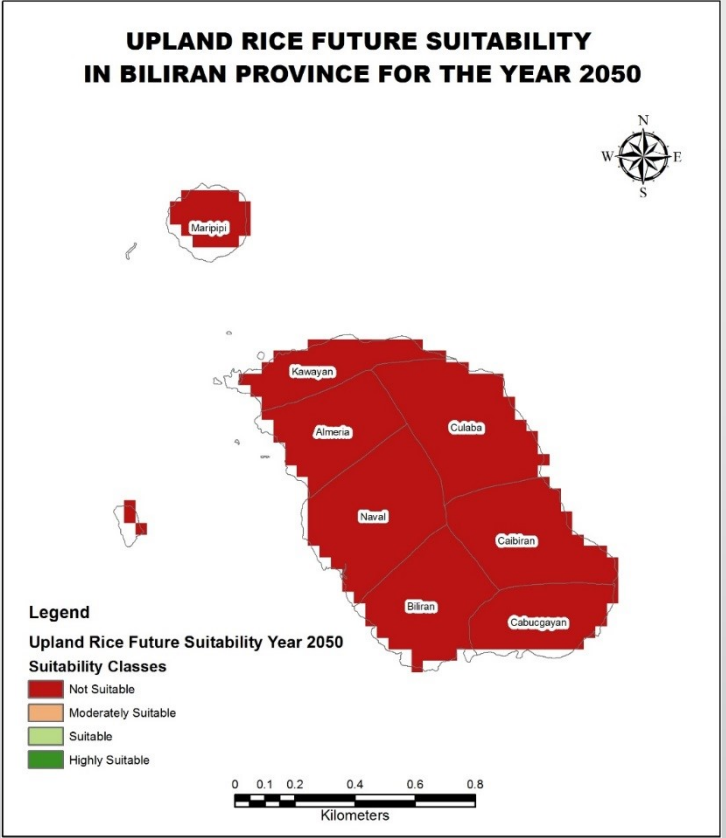
CLIMATE SENSITIVITY OF UPLAND RICE (PROVINCE OF BILIRAN)



CURRENT



YEAR 2030



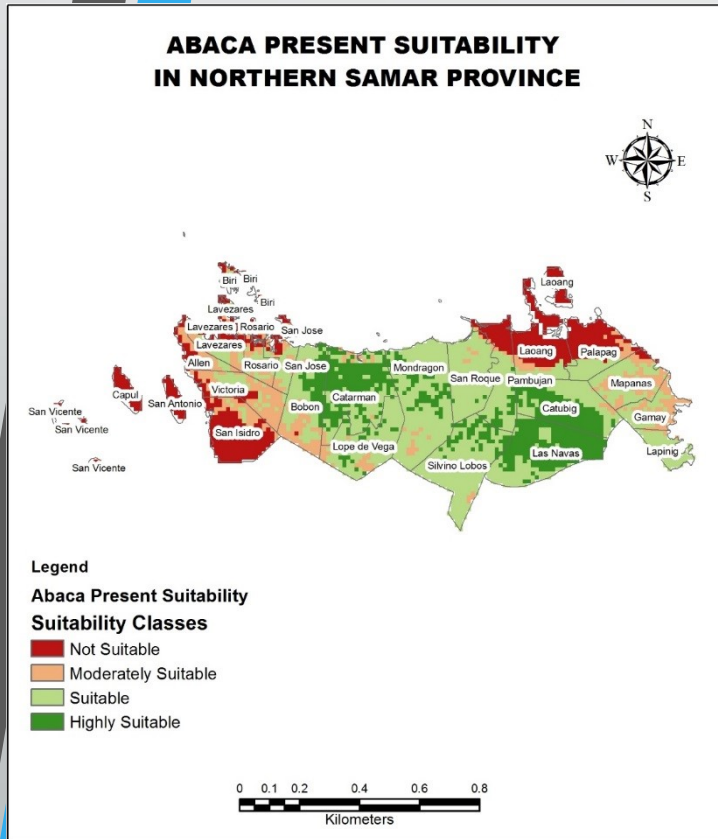
YEAR 2050

There will be no area suitable for Upland rice in year 2030 and 2050 in the whole province of Biliran.

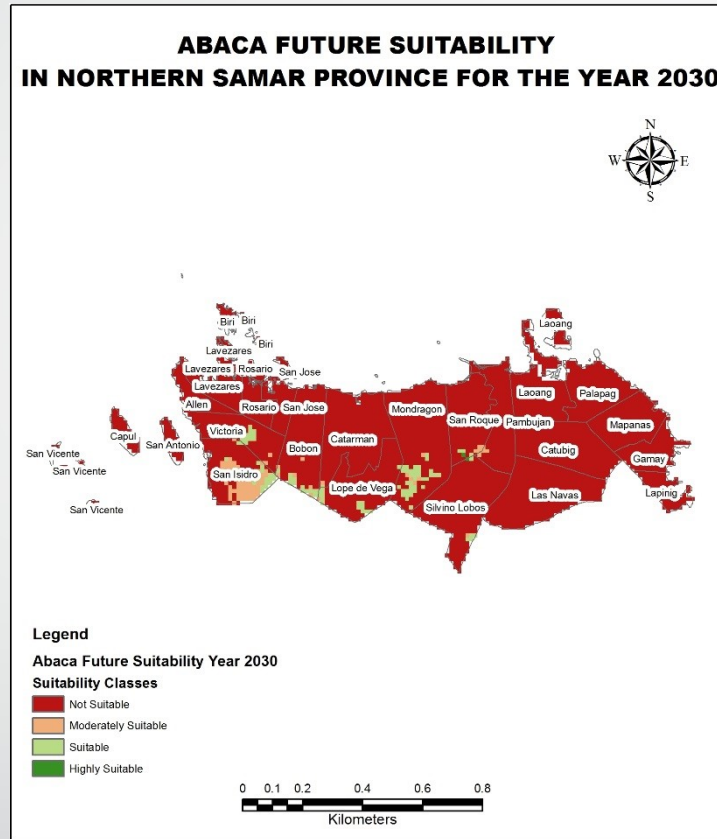


CLIMATE SENSITIVITY BY CROP (PROVINCE OF NORTHERN SAMAR)

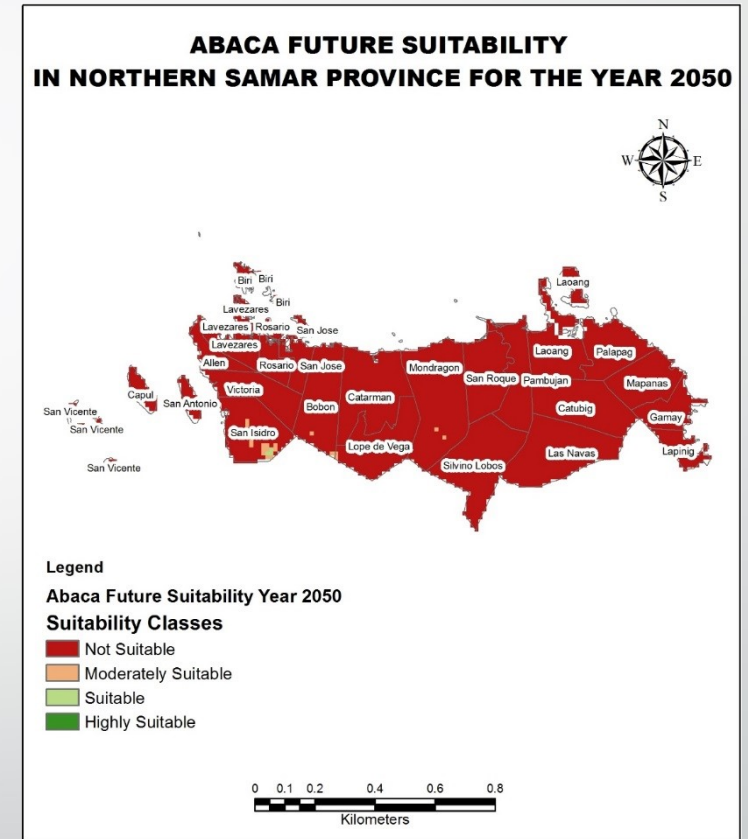
CLIMATE SENSITIVITY OF ABACA (PROVINCE OF NORTHERN SAMAR)



CURRENT



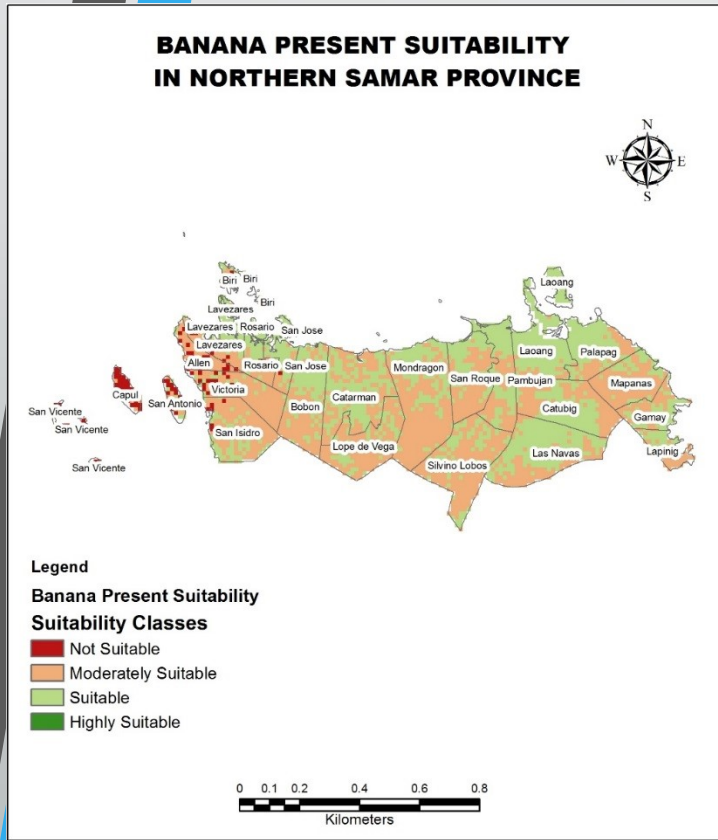
YEAR 2030



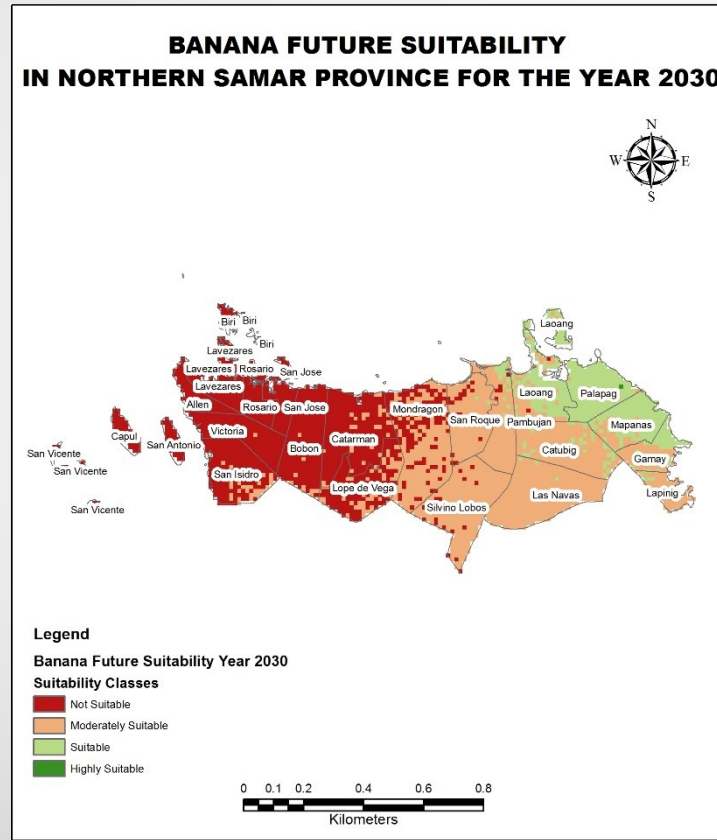
YEAR 2050

There will be no area suitable for Abaca in year 2030 and 2050 in the whole province of Northern Samar.

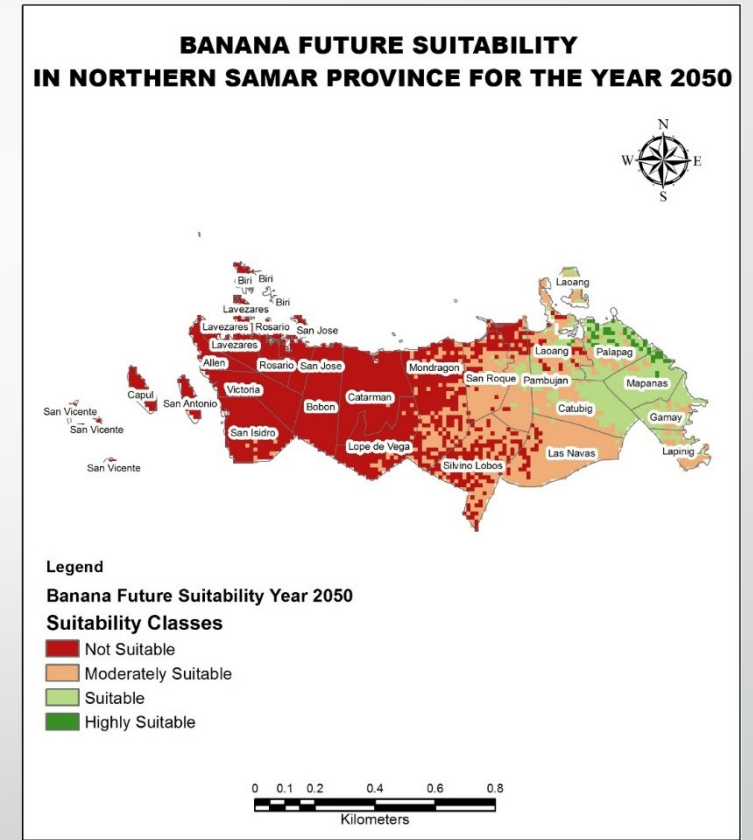
CLIMATE SENSITIVITY OF BANANA (PROVINCE OF NORTHERN SAMAR)



CURRENT



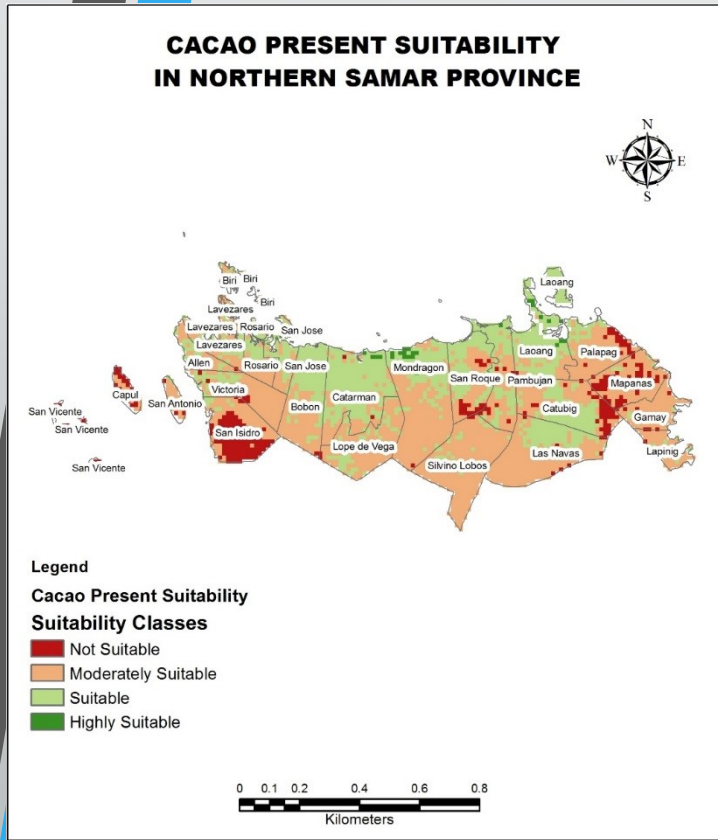
YEAR 2030



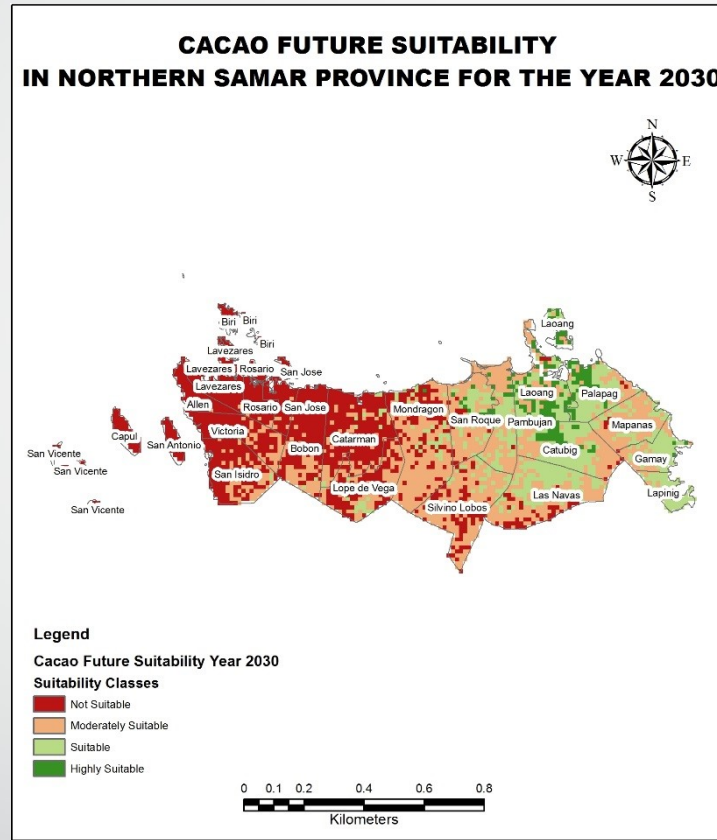
YEAR 2050

The suitable area for Banana will almost be gone in year 2030 and 2050 and the remaining suitable areas can only be found in the eastern municipalities of the province.

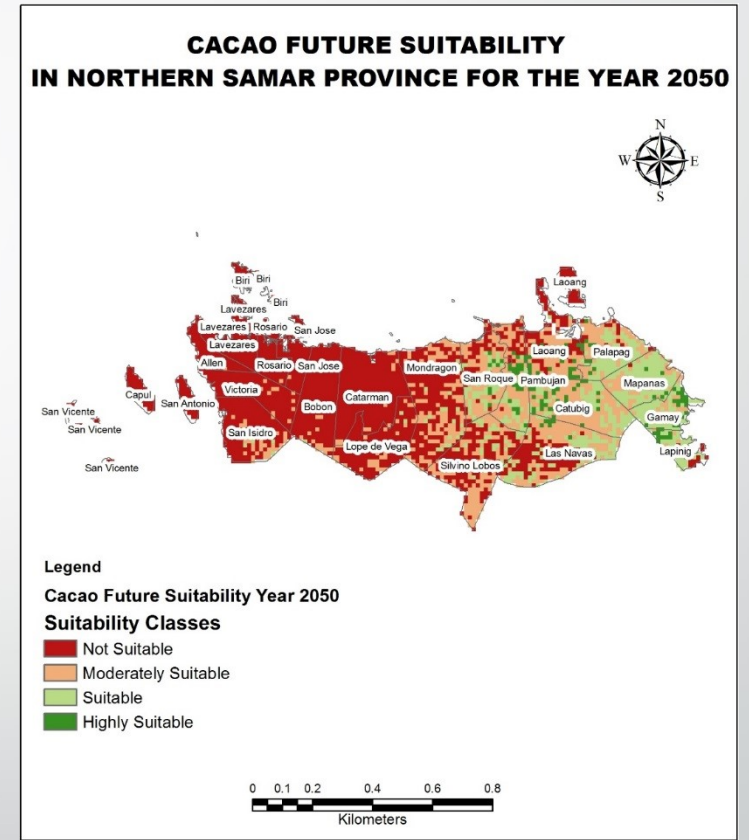
CLIMATE SENSITIVITY OF CACAO (PROVINCE OF NORTHERN SAMAR)



CURRENT



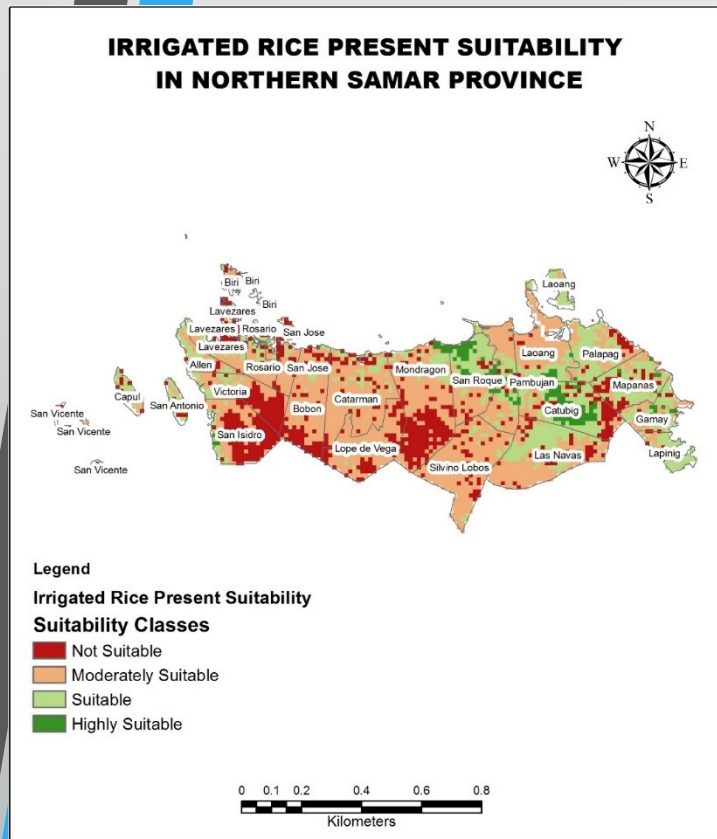
YEAR 2030



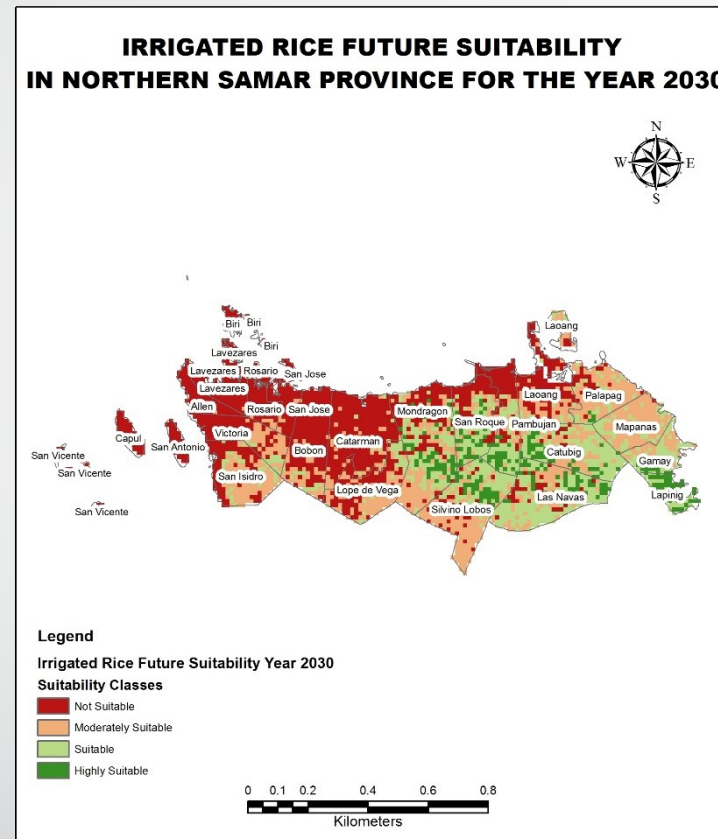
YEAR 2050

The suitable area for Cacao will almost be gone also in year 2030 and 2050 and the remaining suitable areas can only be found in the eastern municipalities of the province.

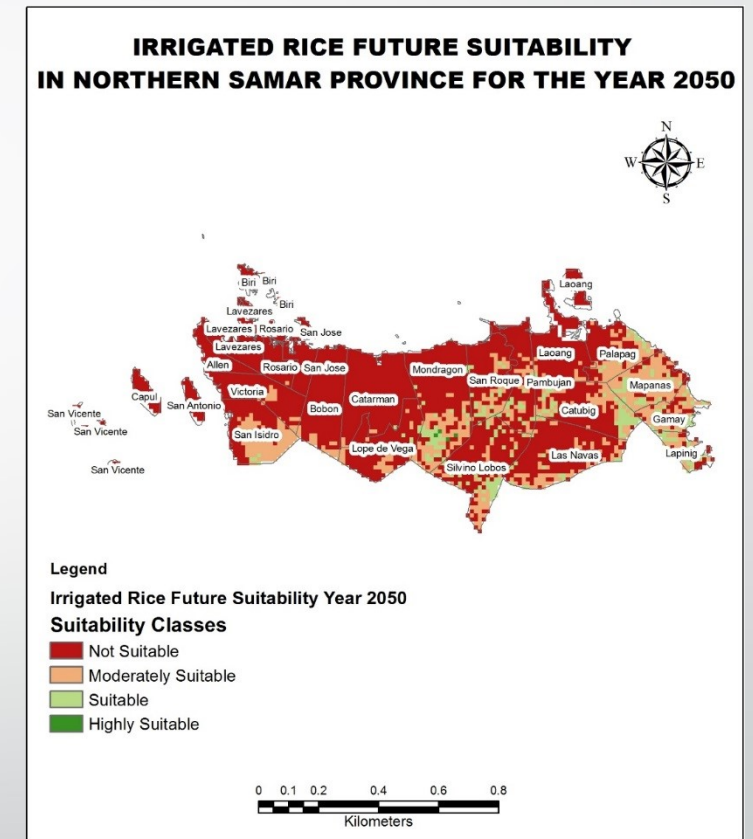
CLIMATE SENSITIVITY OF IRRIGATED RICE (PROVINCE OF NORTHERN SAMAR)



CURRENT



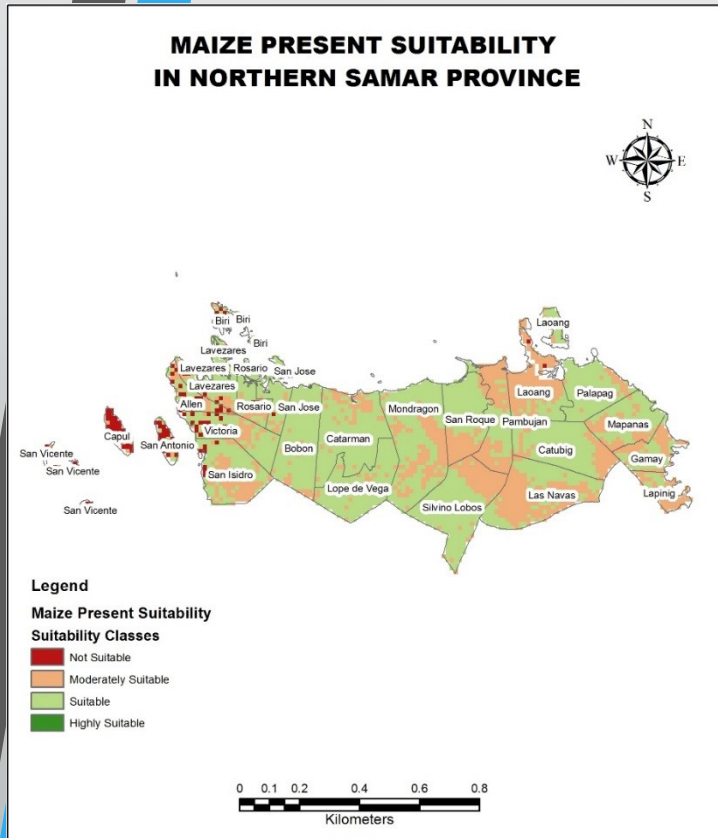
YEAR 2030



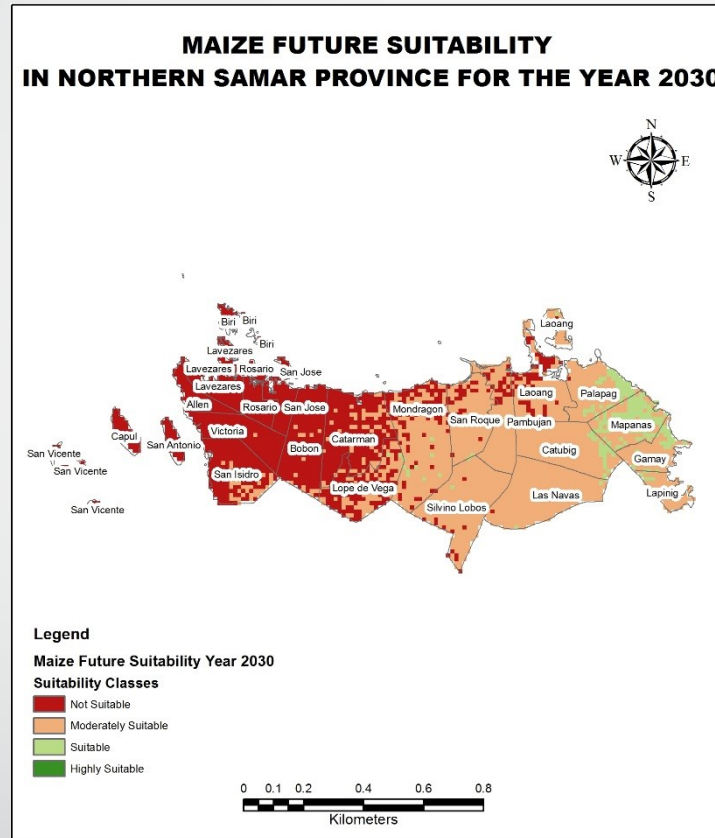
YEAR 2050

The suitable area for Irrigated rice will significantly decrease in year 2030 and 2050 and only patches of suitable areas can be found in the eastern half of the province.

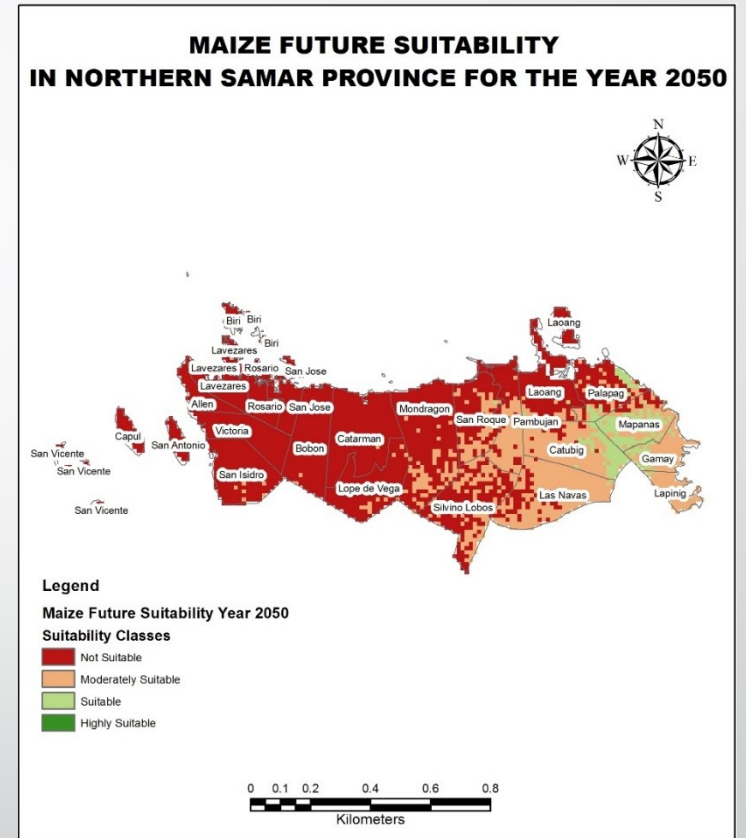
CLIMATE SENSITIVITY OF CORN (PROVINCE OF NORTHERN SAMAR)



CURRENT



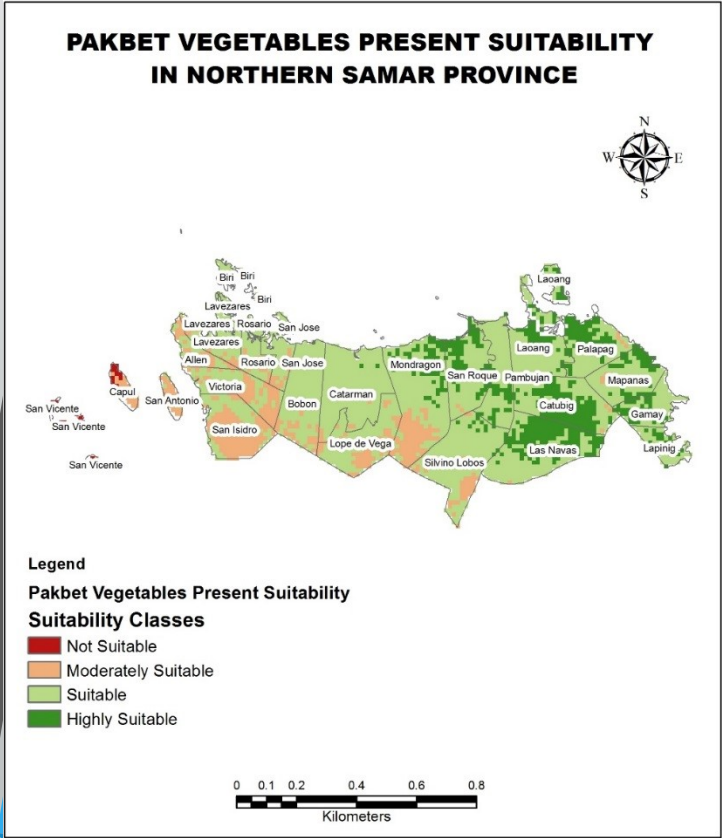
YEAR 2030



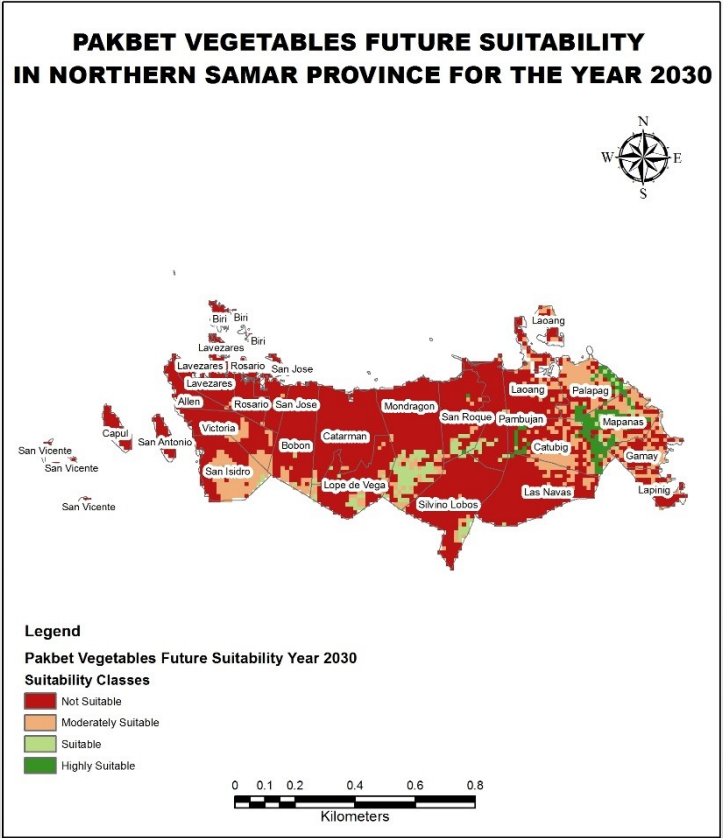
YEAR 2050

The suitable area for Corn will be gone in almost the whole province in year 2030 and 2050 with very small suitable areas remaining in the easternmost municipalities.

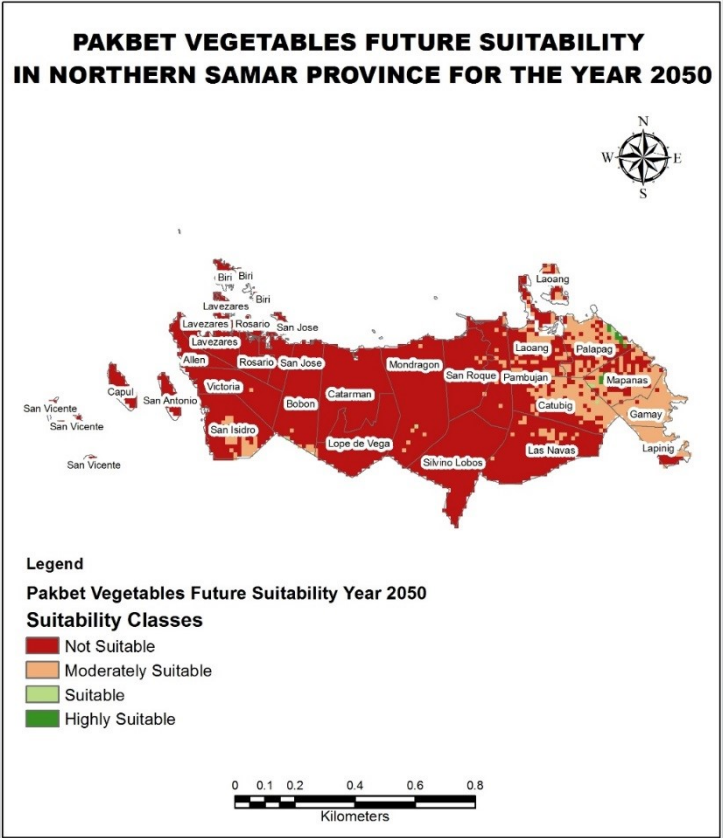
CLIMATE SENSITIVITY OF PAKBET (PROVINCE OF NORTHERN SAMAR)



CURRENT



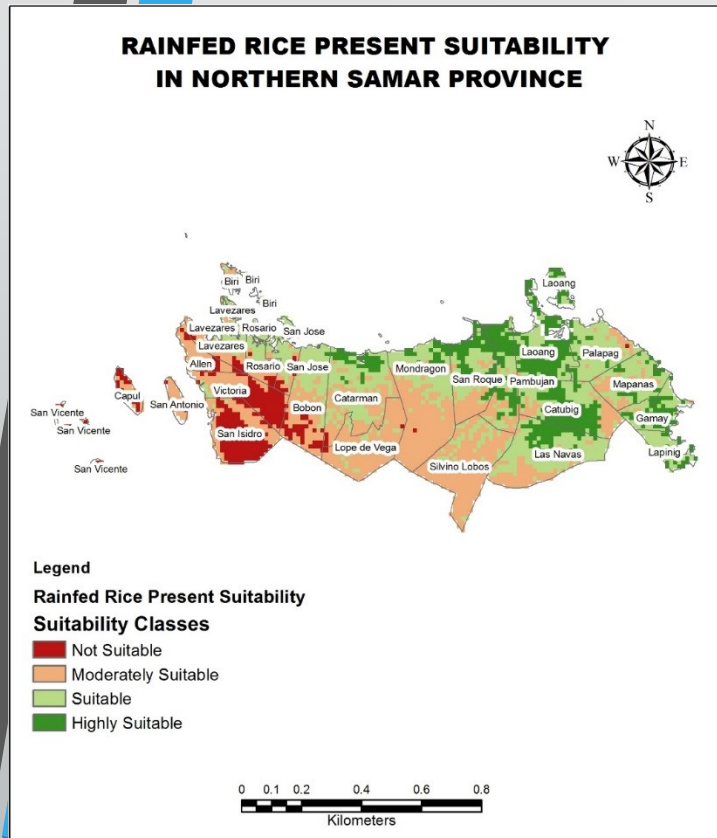
YEAR 2030



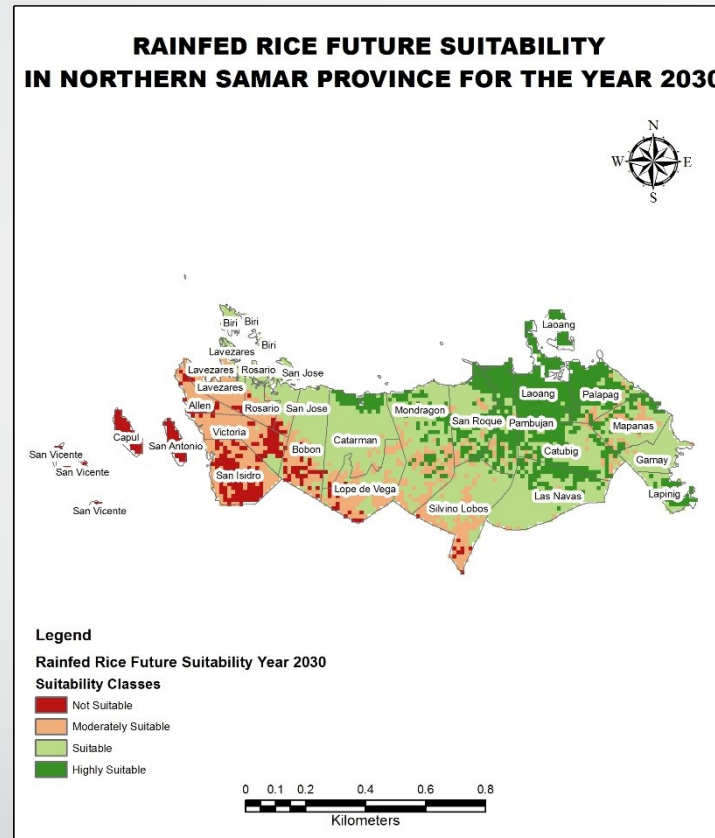
YEAR 2050

The suitable area for Pakbet will all be gone in year 2030 and 2050.

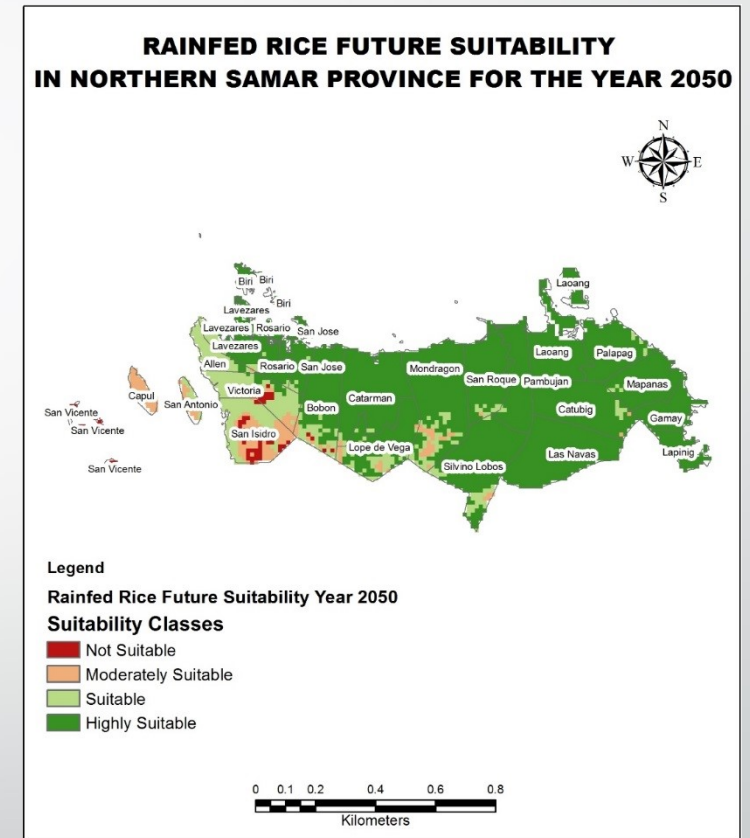
CLIMATE SENSITIVITY OF RAINFED RICE (PROVINCE OF NORTHERN SAMAR)



CURRENT



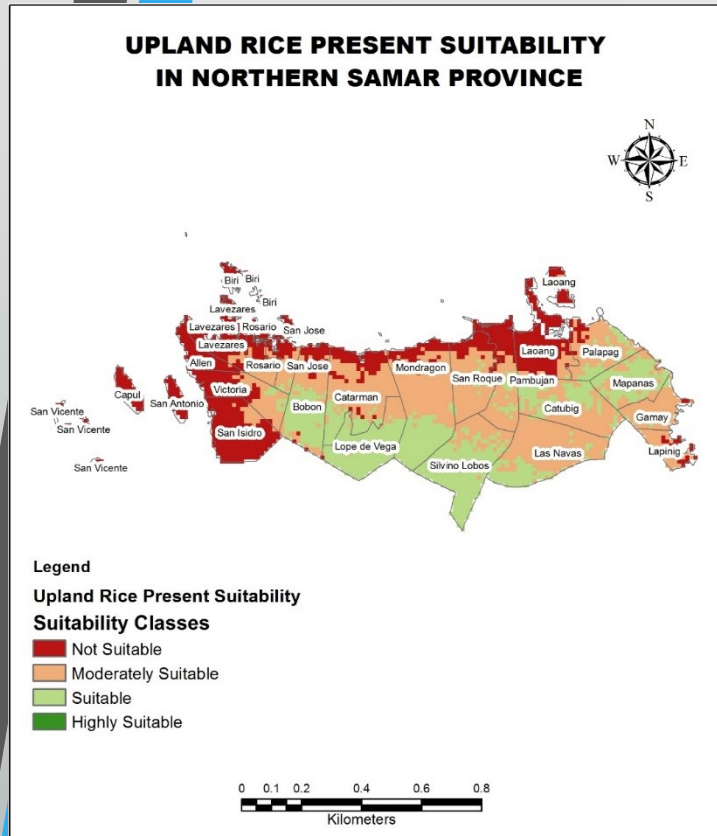
YEAR 2030



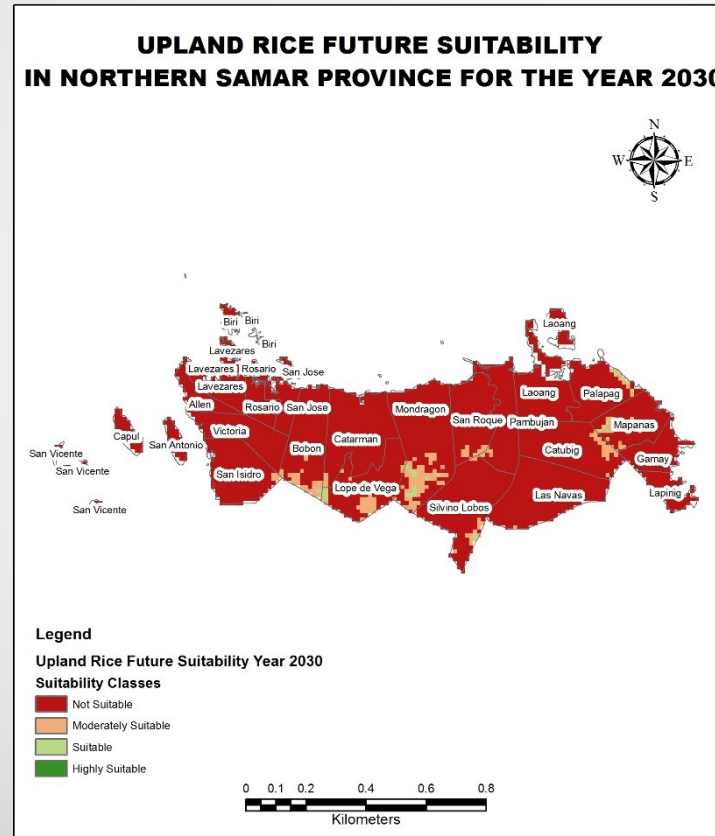
YEAR 2050

The whole province will either be highly suitable and/or suitable for Rainfed rice in year 2030 and 2050.

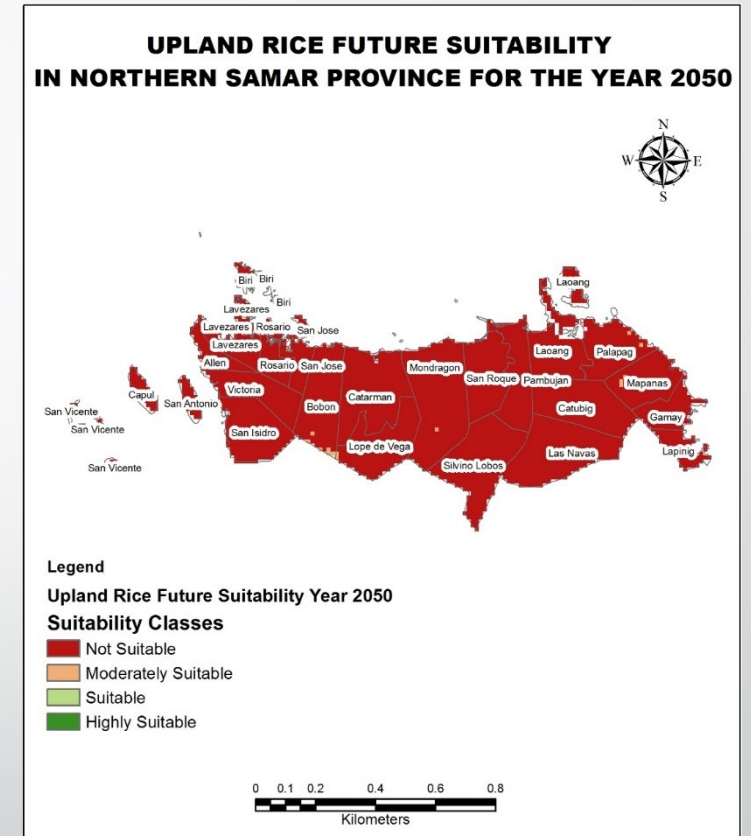
CLIMATE SENSITIVITY OF UPLAND RICE (PROVINCE OF NORTHERN SAMAR)



CURRENT



YEAR 2030



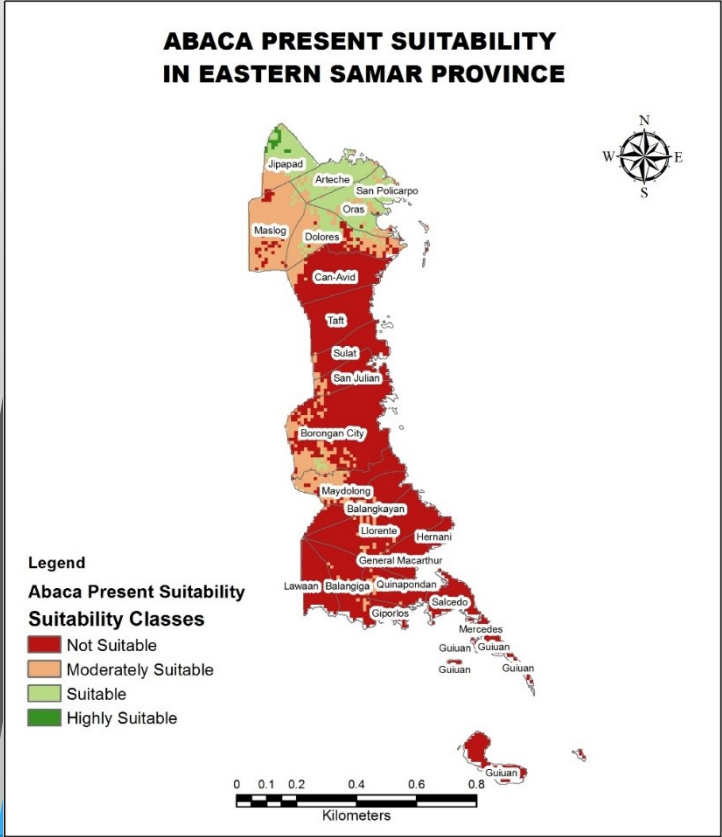
YEAR 2050

All suitable area for Upland rice will all be gone in year 2030 and 2050.

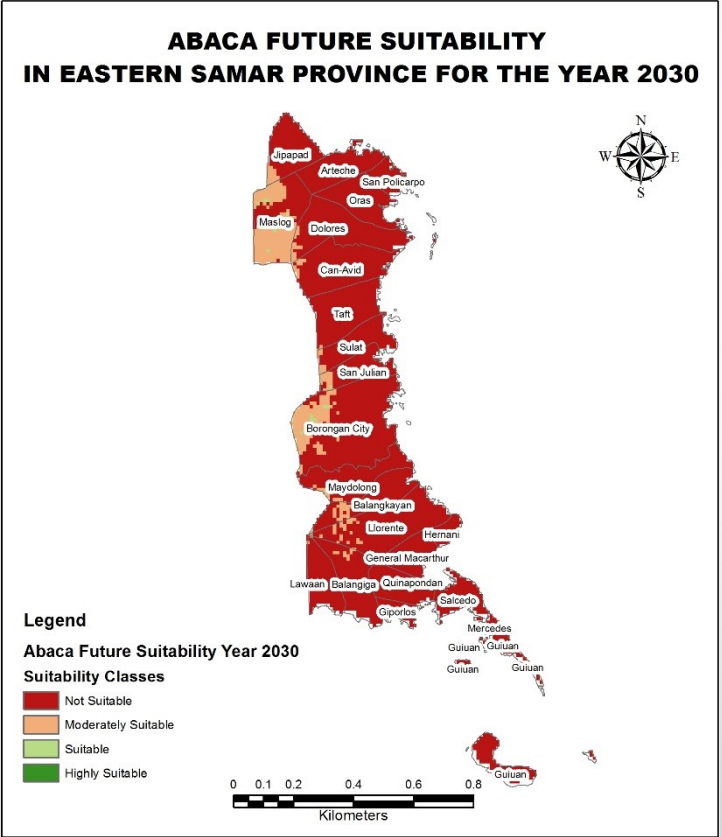


CLIMATE SENSITIVITY BY CROP (PROVINCE OF EASTERN SAMAR)

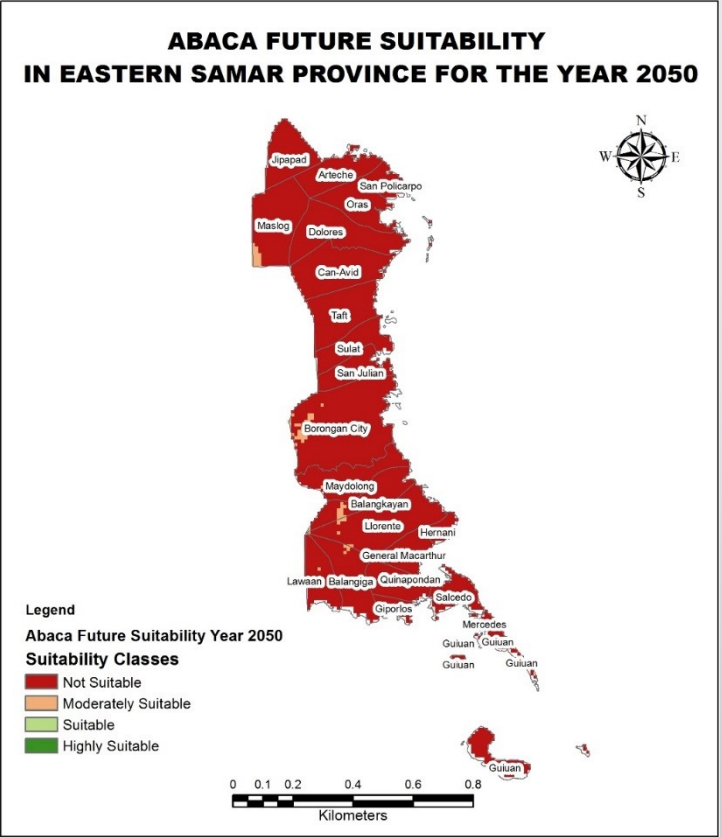
CLIMATE SENSITIVITY OF ABACA (PROVINCE OF EASTERN SAMAR)



CURRENT



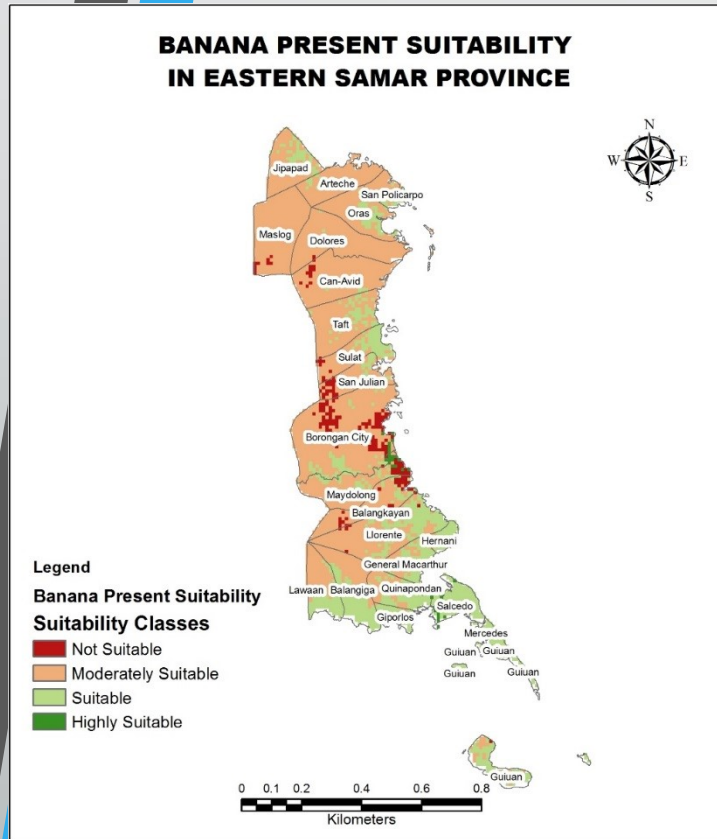
YEAR 2030



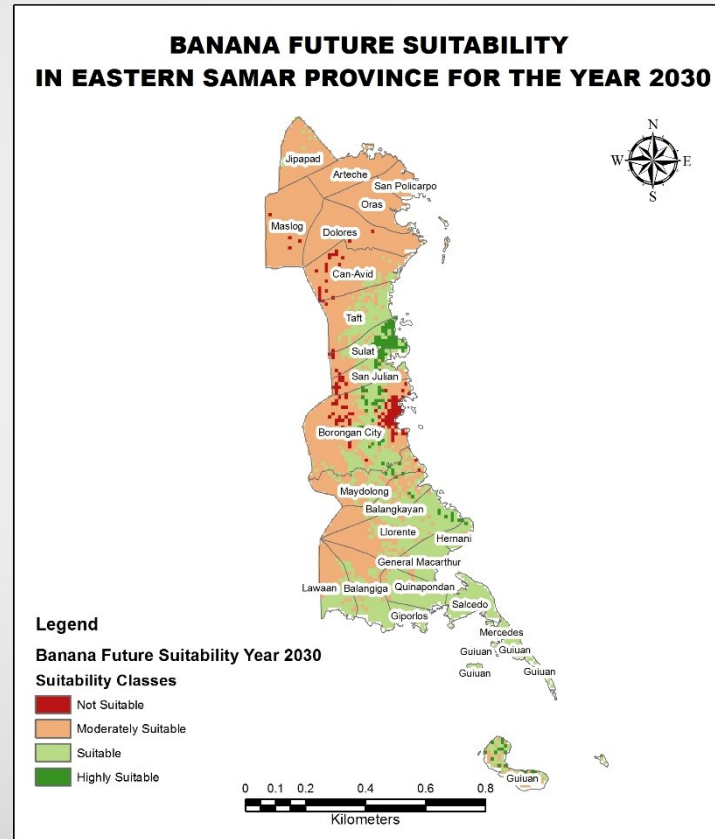
YEAR 2050

All suitable area for Abaca will all be gone in year 2030 and 2050.

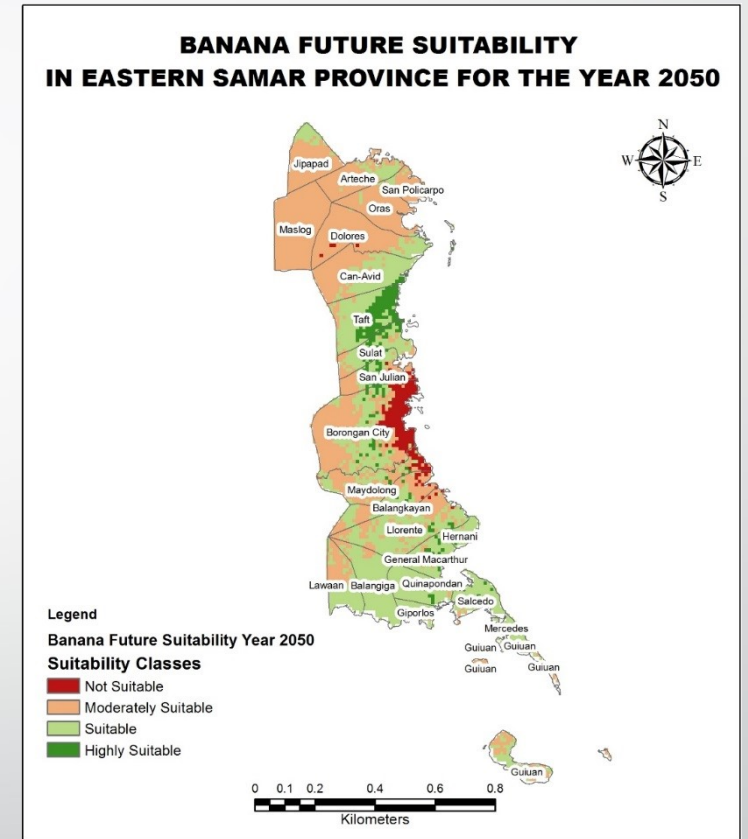
CLIMATE SENSITIVITY OF BANANA (PROVINCE OF EASTERN SAMAR)



CURRENT



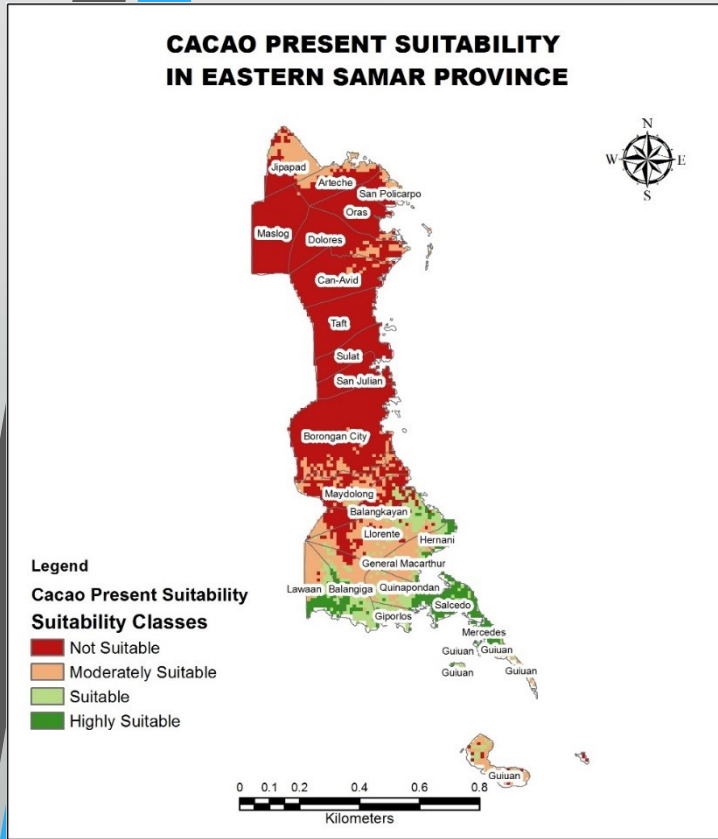
YEAR 2030



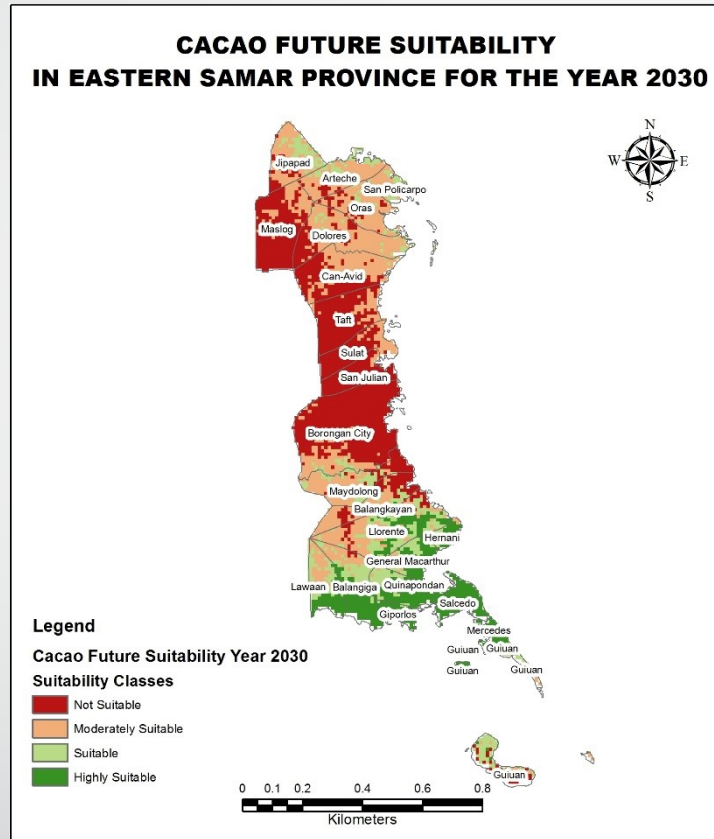
YEAR 2050

There will be an increase in both suitable and highly suitable area for Banana distributed in most coastal municipalities in year 2030 and 2050.

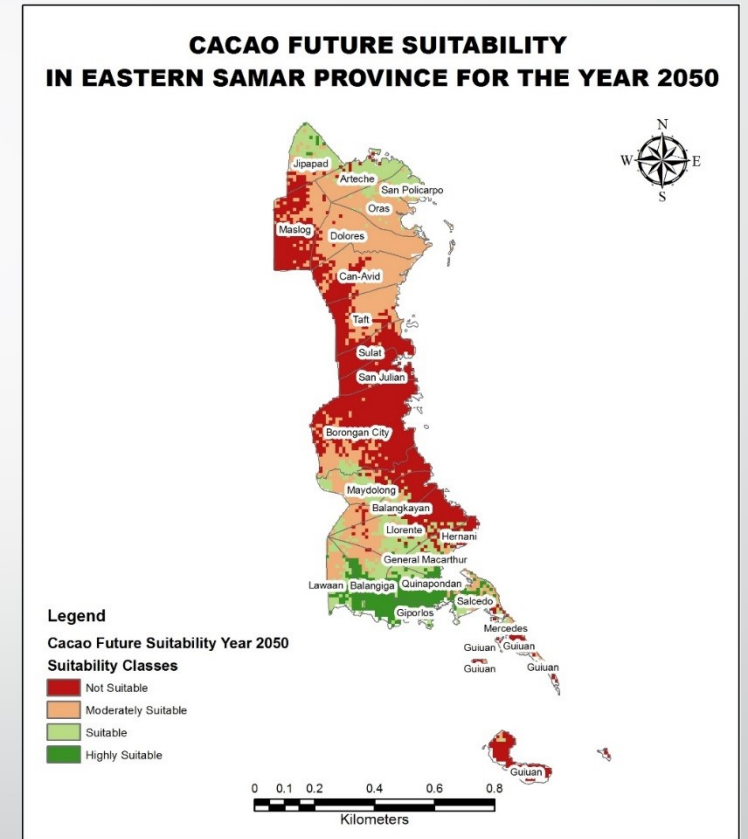
CLIMATE SENSITIVITY OF CACAO (PROVINCE OF EASTERN SAMAR)



CURRENT



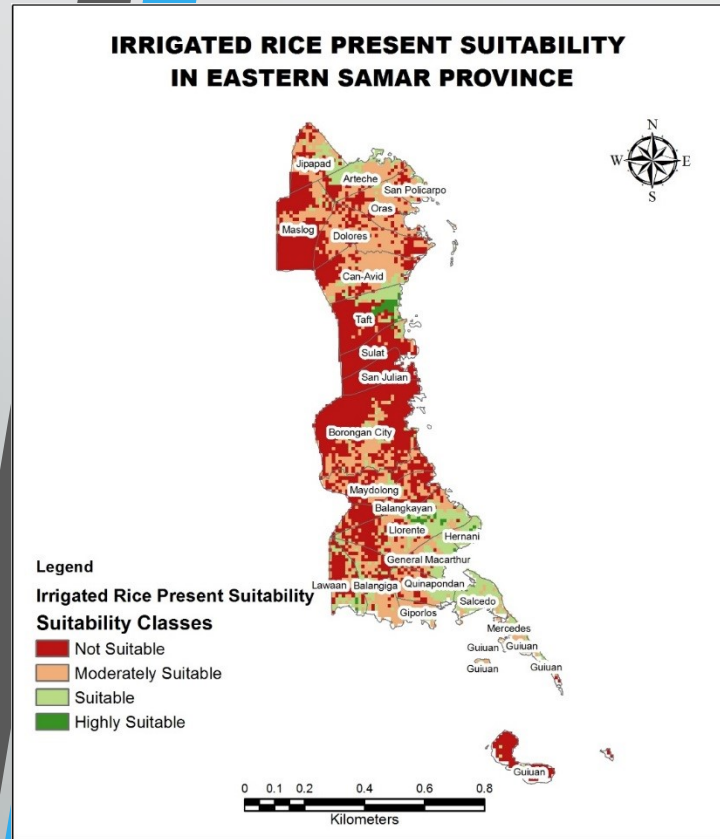
YEAR 2030



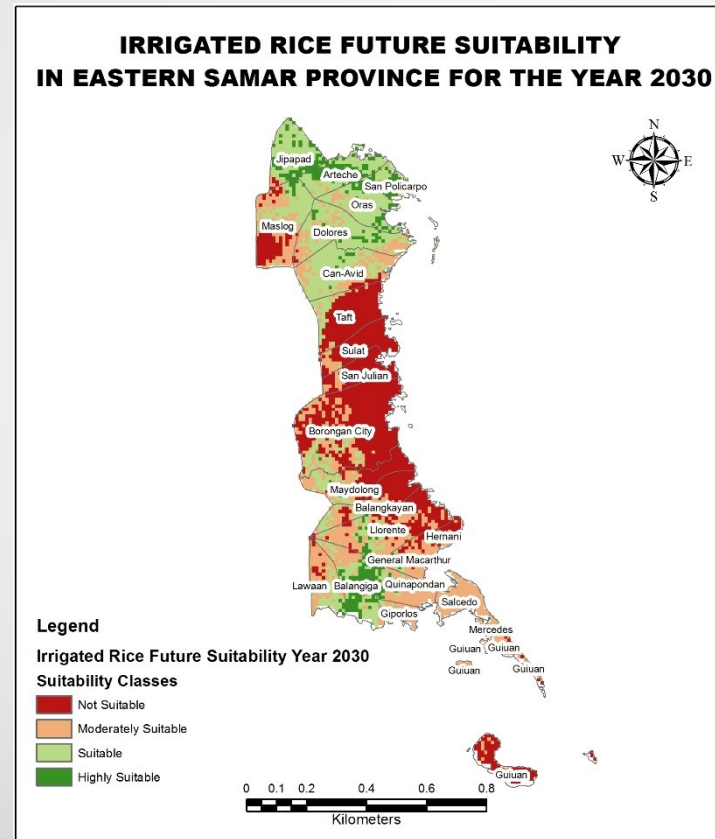
YEAR 2050

There will be a small increase in highly suitable area for Cacao mostly located in the Northern and Southern municipalities in year 2030 and 2050.

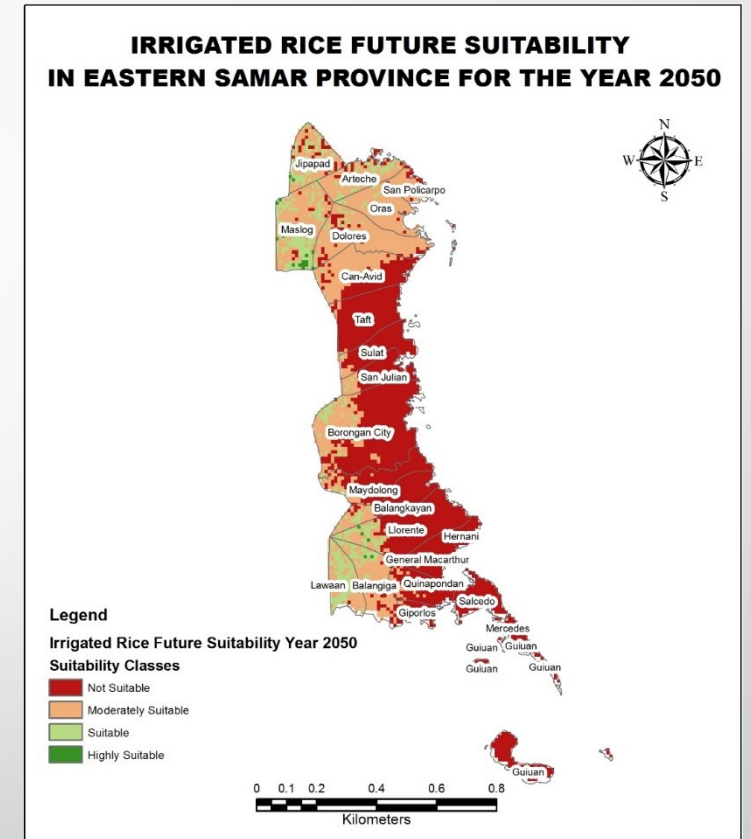
CLIMATE SENSITIVITY OF IRRIGATED RICE (PROVINCE OF EASTERN SAMAR)



CURRENT



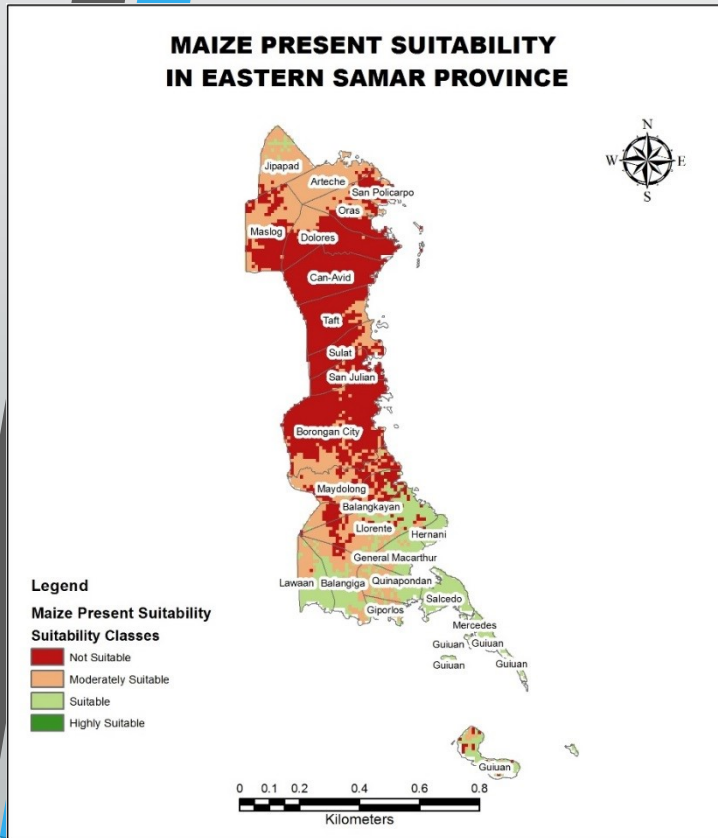
YEAR 2030



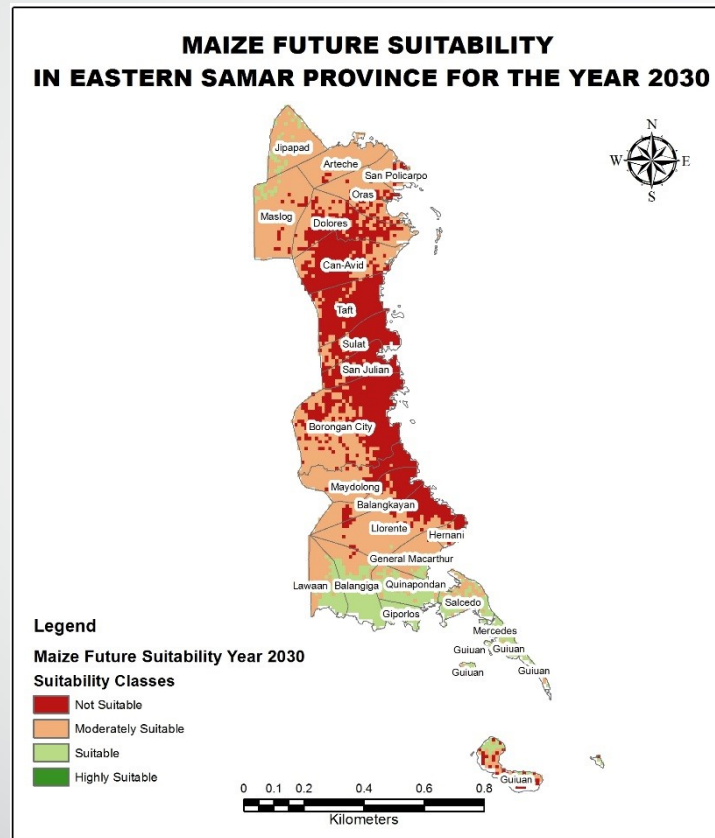
YEAR 2050

There will be a small increase in highly suitable area for Irrigated rice in year 2030 but decreases in year 2050, these are located in the northern and southern municipalities.

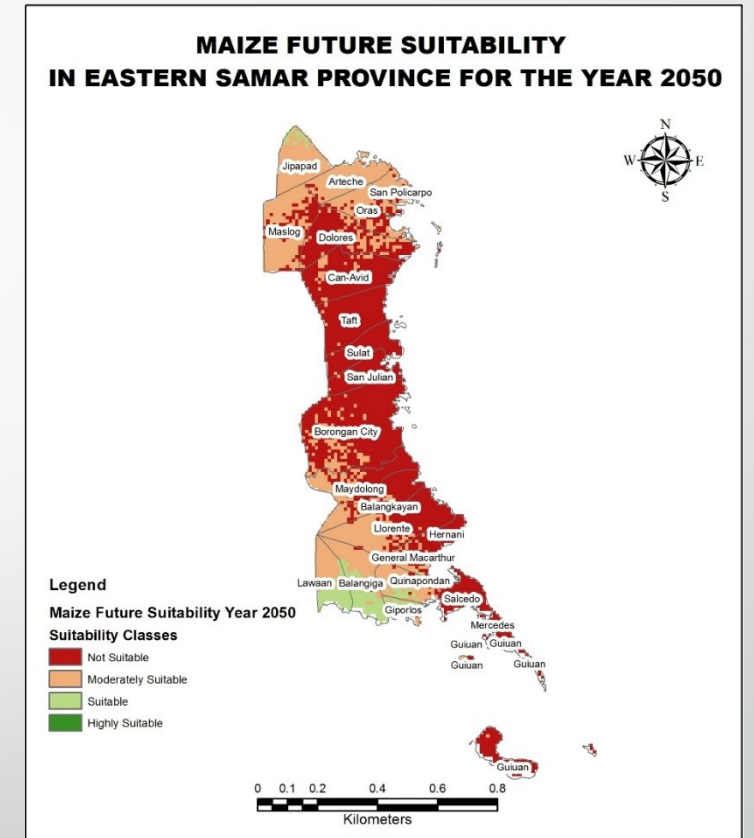
CLIMATE SENSITIVITY OF CORN (PROVINCE OF EASTERN SAMAR)



CURRENT



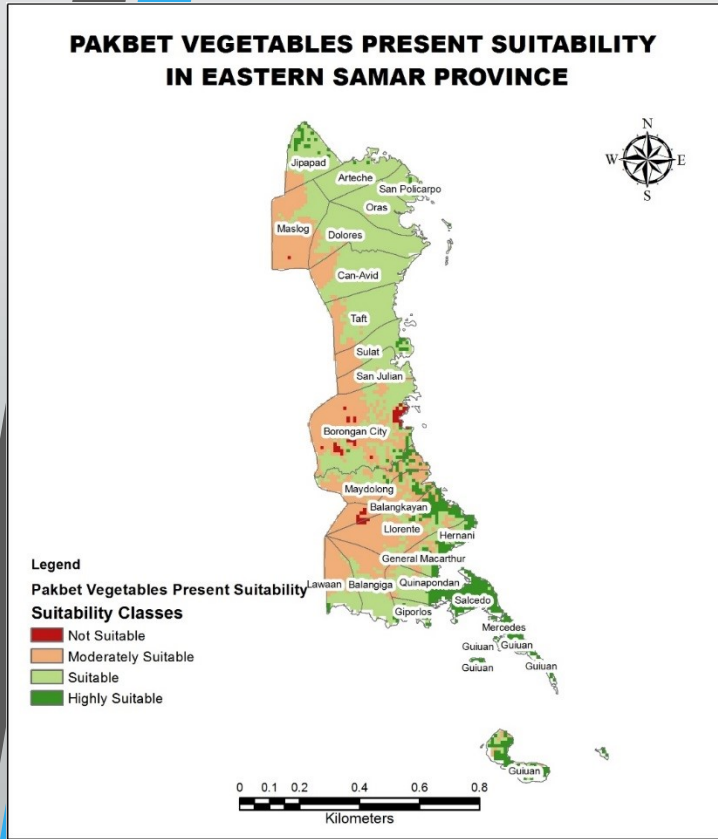
YEAR 2030



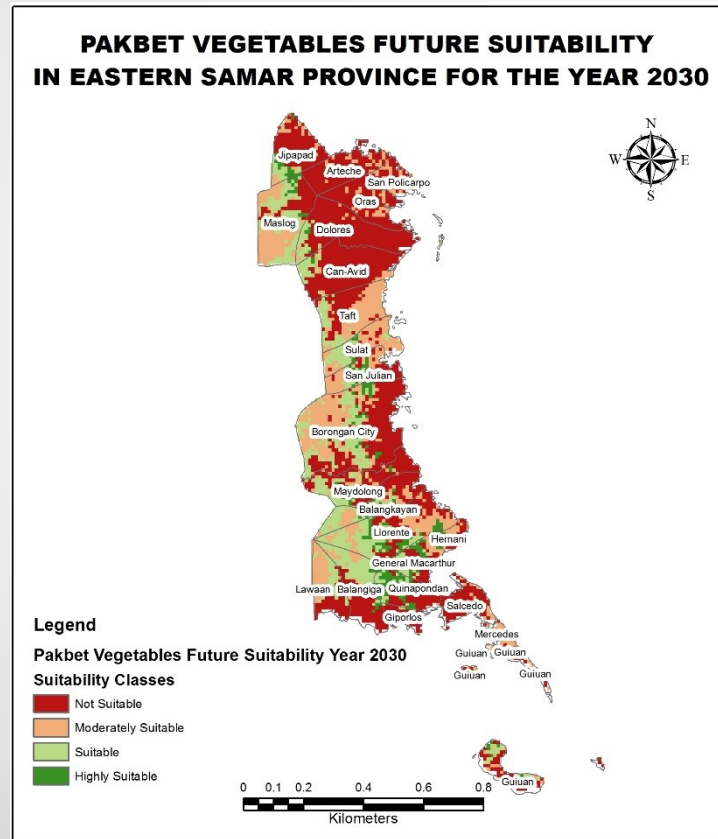
YEAR 2050

There will be a decrease in suitable area for Corn in year 2030 and 2050 and these are located in the southern portion of the province.

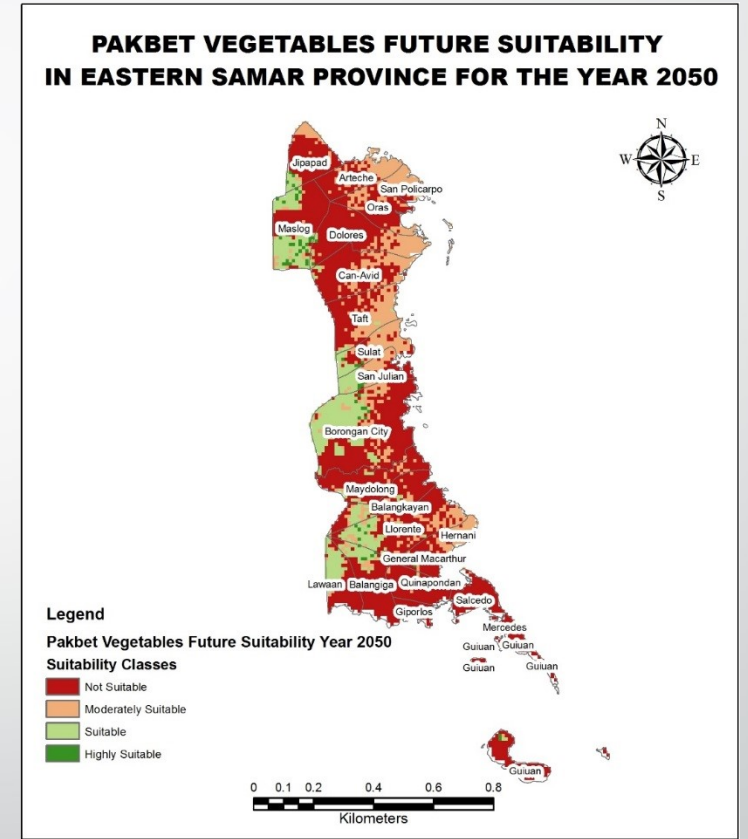
CLIMATE SENSITIVITY OF PAKBET (PROVINCE OF EASTERN SAMAR)



CURRENT



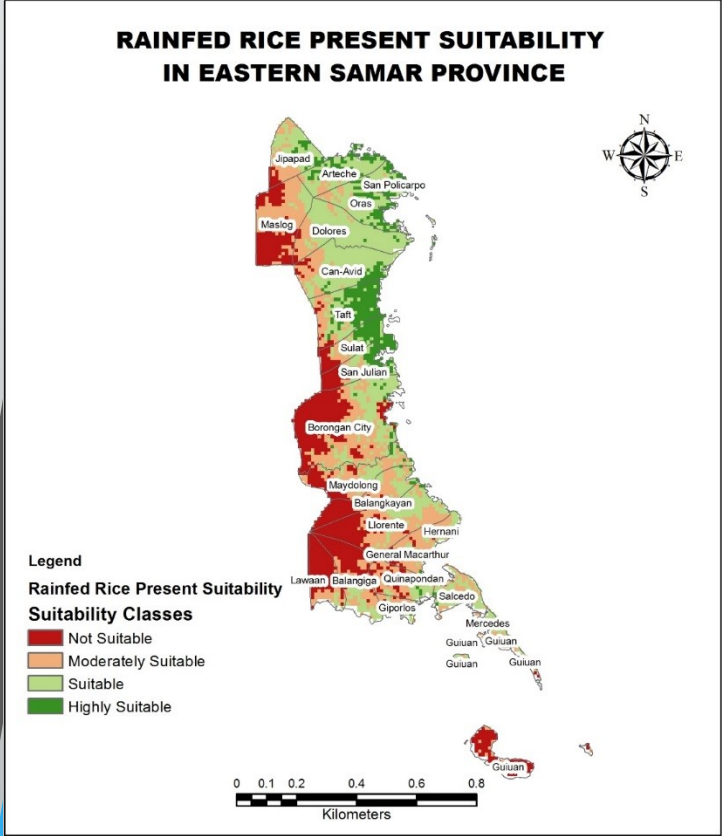
YEAR 2030



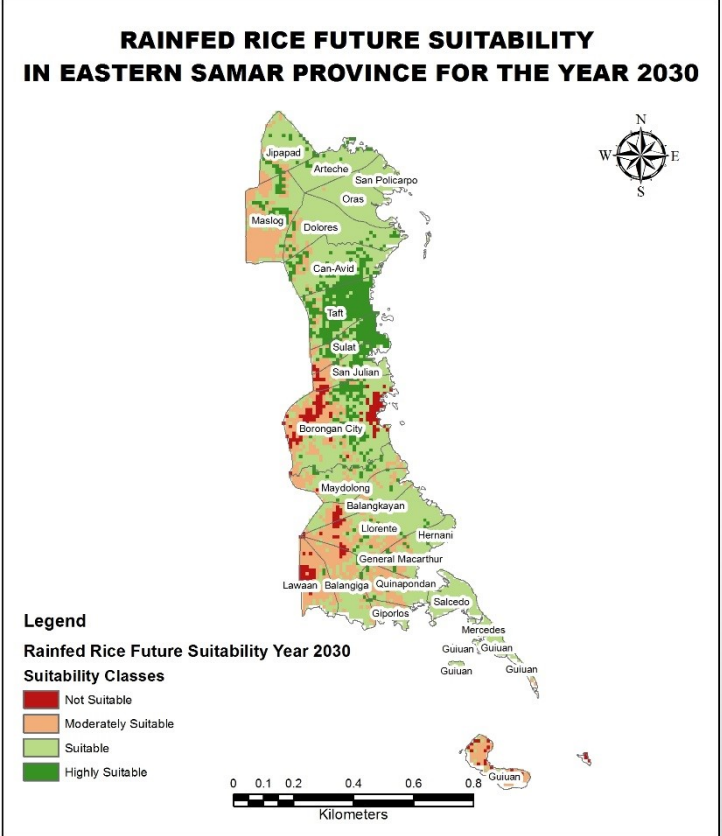
YEAR 2050

The area suitable for Pakbet will significantly decrease in year 2030 and 2050 and there is also a shift in location of these suitable areas from coastal municipalities to the interior and/or elevated portion of the province.

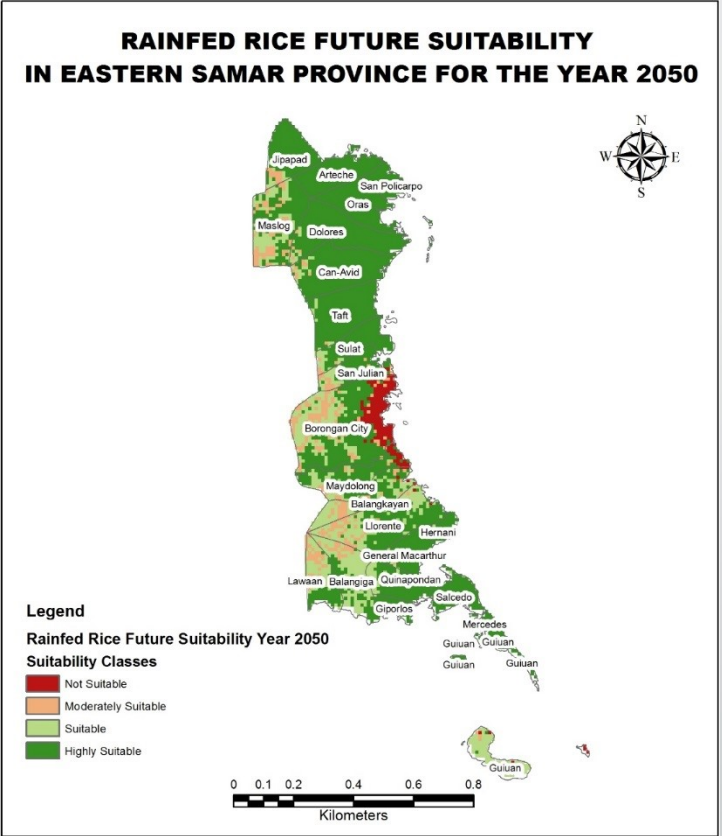
CLIMATE SENSITIVITY OF RAINFED RICE (PROVINCE OF EASTERN SAMAR)



CURRENT



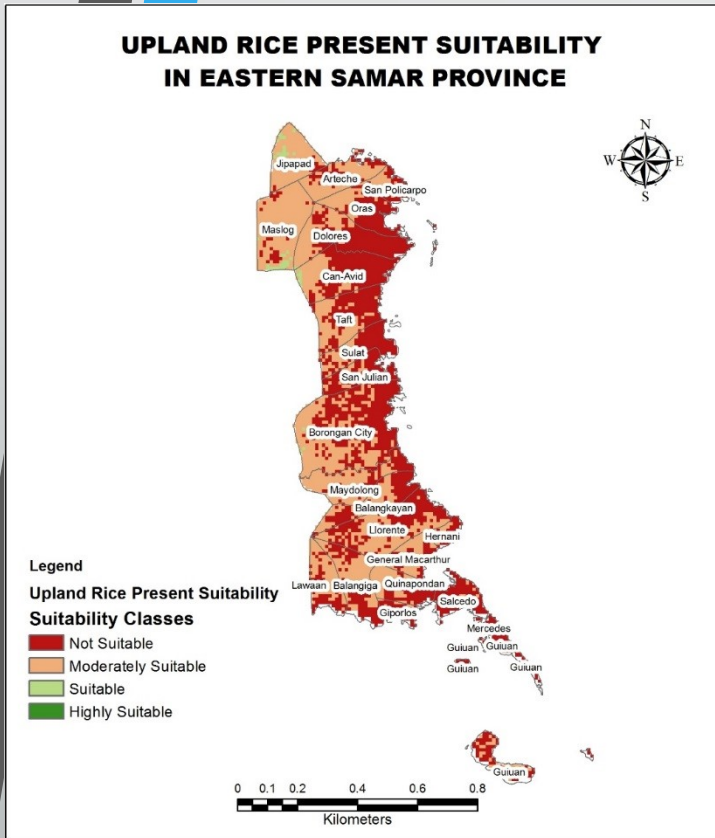
YEAR 2030



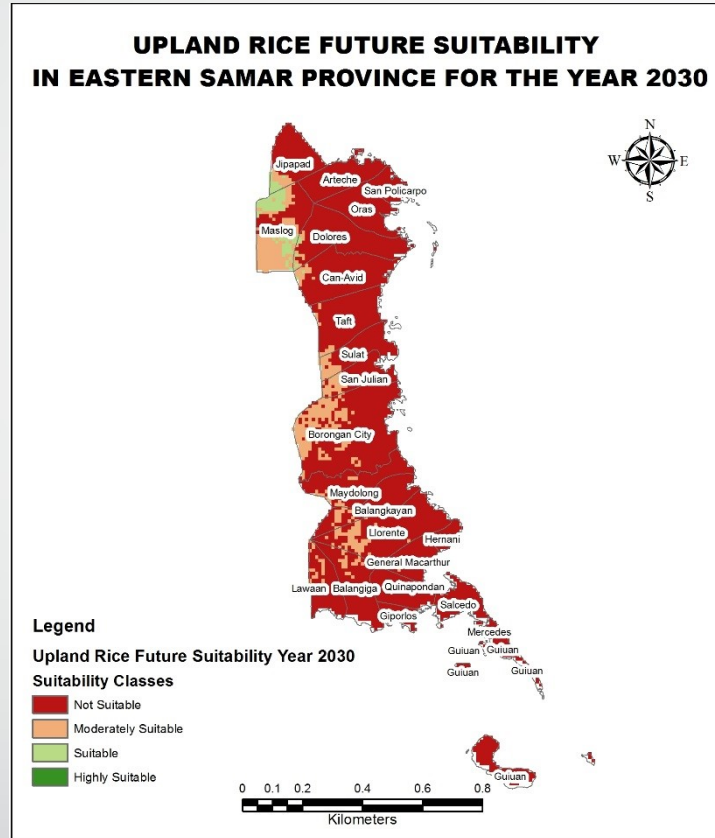
YEAR 2050

There will be a significant increase in suitable and highly suitable area for Rainfed rice for the whole province in year 2030 and 2050.

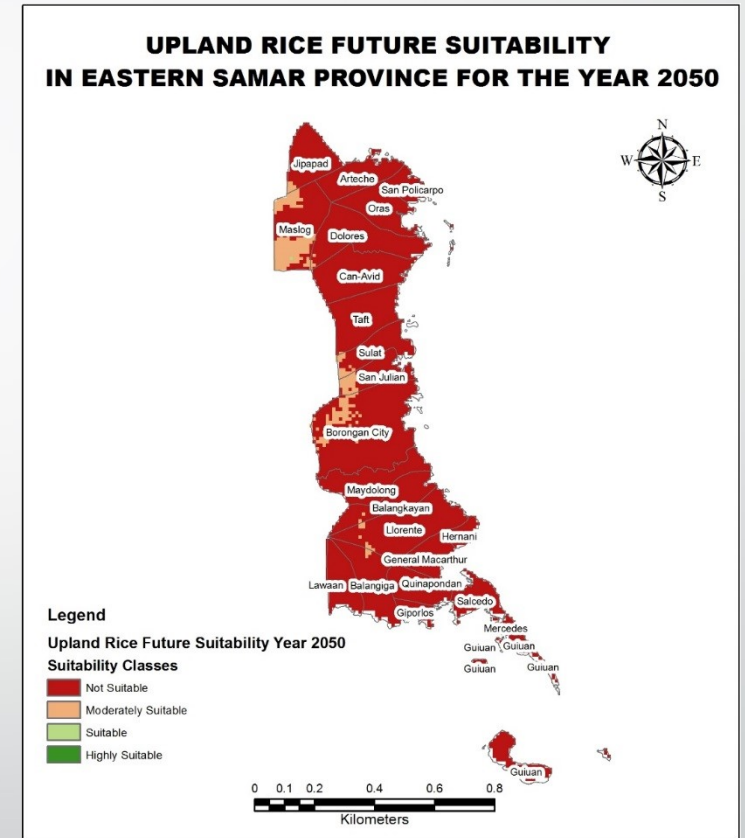
CLIMATE SENSITIVITY OF UPLAND RICE (PROVINCE OF EASTERN SAMAR)



CURRENT



YEAR 2030



YEAR 2050

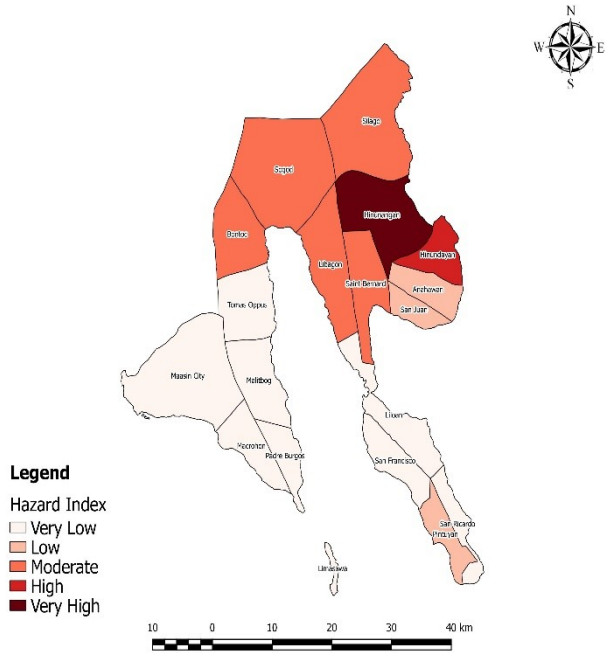
There is no more suitable area for Upland rice in the whole province in year 2030 and 2050.

HAZARDS ANALYSIS

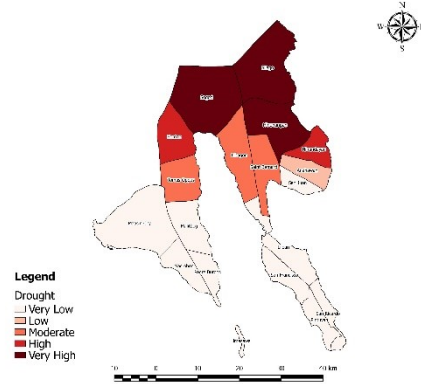
- 1) DROUGHT
- 2) EROSION
- 3) FLOOD
- 4) STORM SURGE
- 5) LANDSLIDE
- 6) SALTWATER INTRUSION
- 7) TROPICAL CYCLONE
- 8) SEA LEVEL RISE

* Data used was taken from the existing hazards database of AMIA 1 project

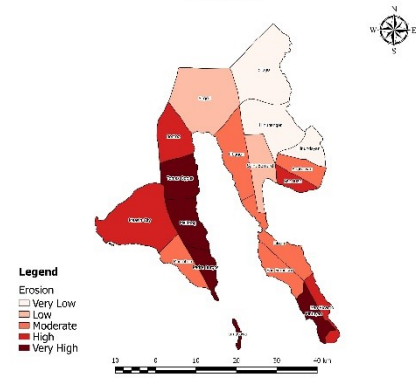
HAZARD INDEX OF SOUTHERN LEYTE PROVINCE



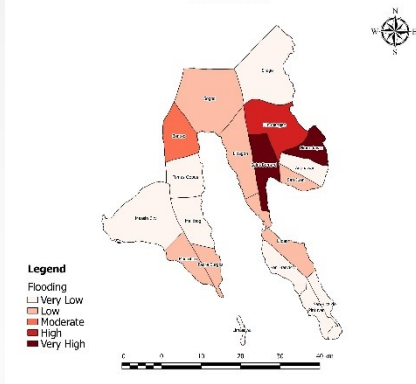
SOUTHERN LEYTE PROVINCE DROUGHT



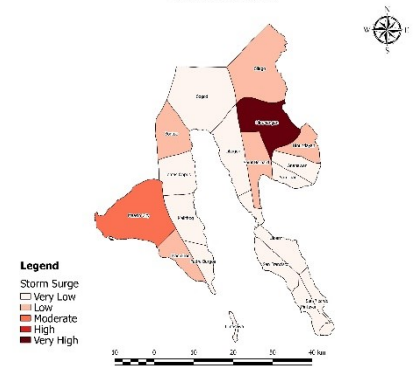
SOUTHERN LEYTE PROVINCE EROSION



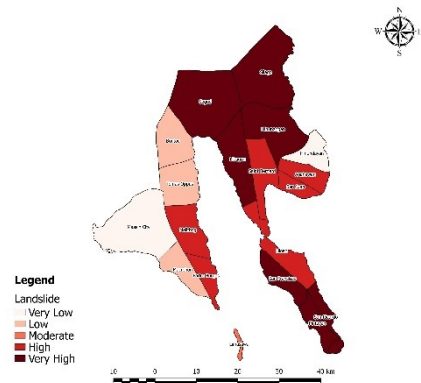
SOUTHERN LEYTE PROVINCE FLOODING



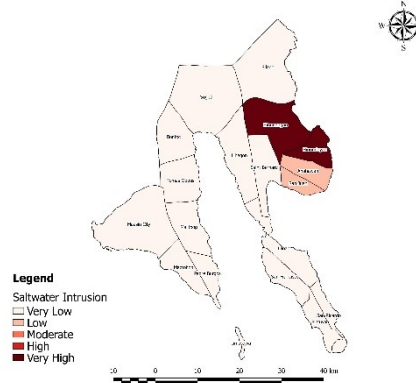
SOUTHERN LEYTE PROVINCE STORM SURGE



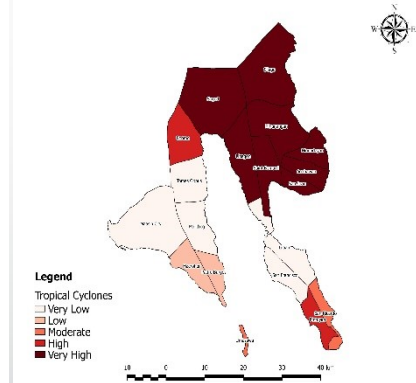
SOUTHERN LEYTE PROVINCE LANDSLIDE



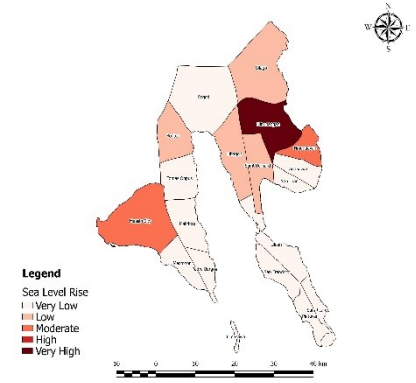
SOUTHERN LEYTE PROVINCE SALTWATER INTRUSION



SOUTHERN LEYTE PROVINCE TROPICAL CYCLONES



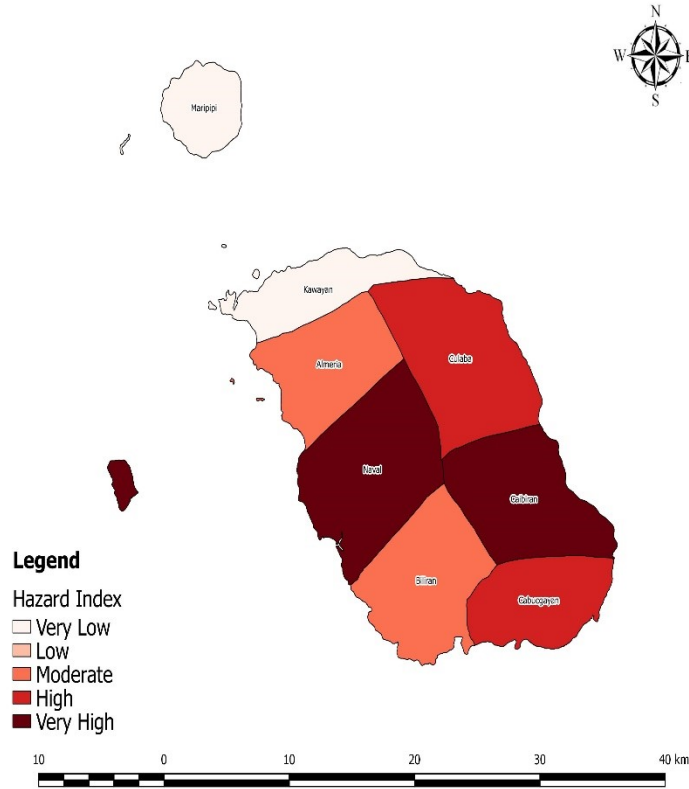
SOUTHERN LEYTE PROVINCE SEA LEVEL RISE



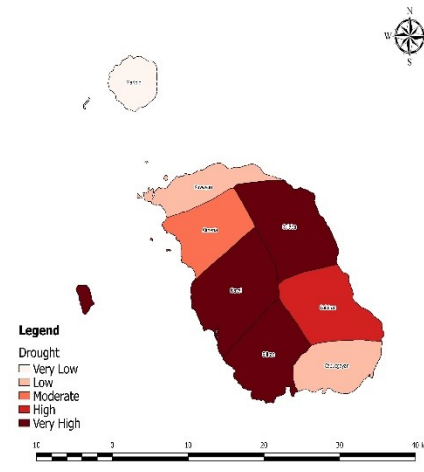
TYPE OF HAZARD PER MUNICIPALITY (PROVINCE OF SOUTHERN LEYTE)

- The municipality of Hinunangan has the highest hazards index among the municipalities of Southern Leyte.

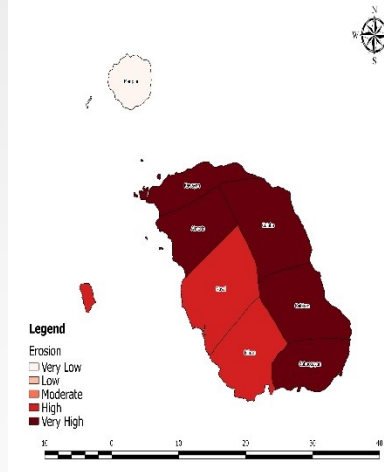
HAZARD INDEX OF BILIRAN PROVINCE



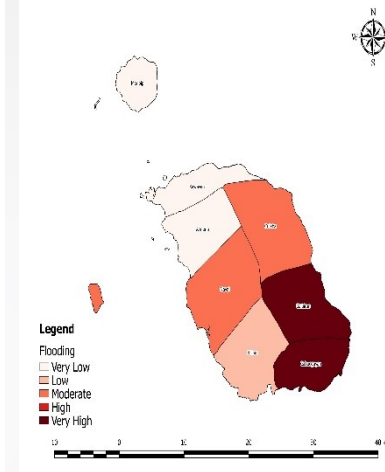
BILIRAN PROVINCE DROUGHT



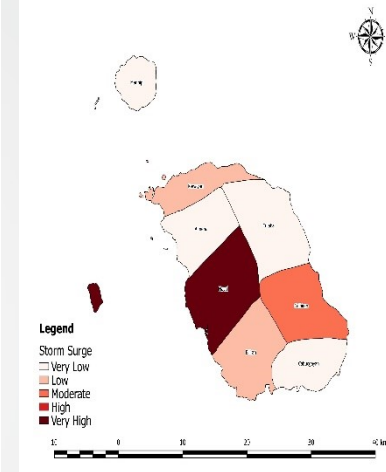
BILIRAN PROVINCE EROSION



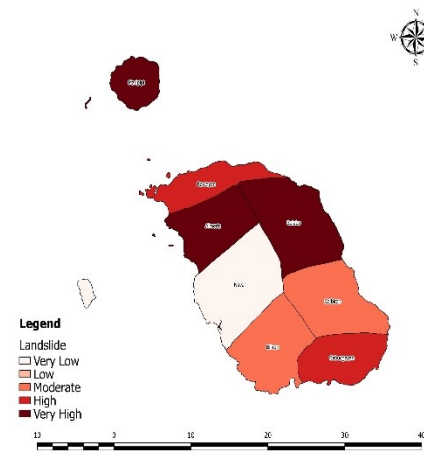
BILIRAN PROVINCE FLOODING



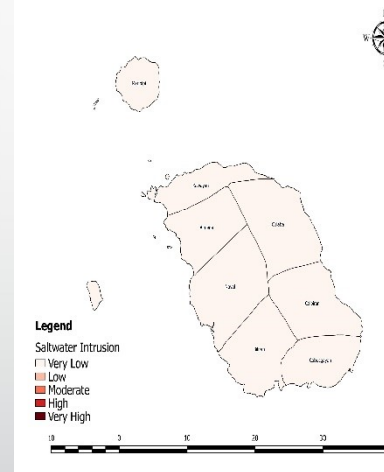
BILIRAN PROVINCE STORM SURGE



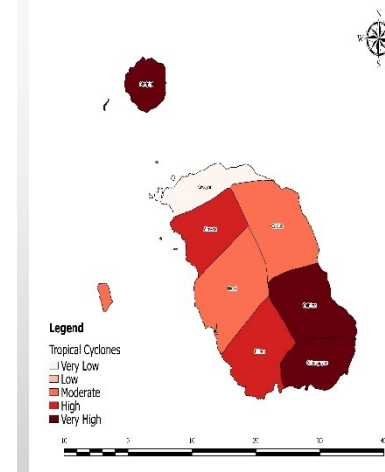
BILIRAN PROVINCE LANDSLIDE



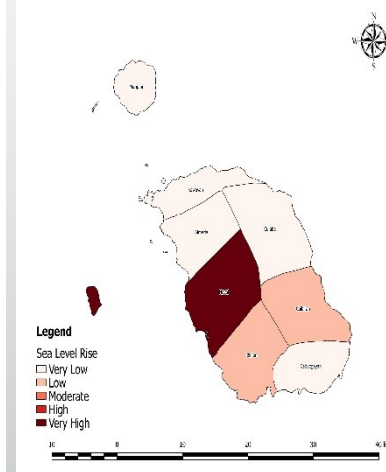
BILIRAN PROVINCE SALTWATER INTRUSION



BILIRAN PROVINCE TROPICAL CYCLONES



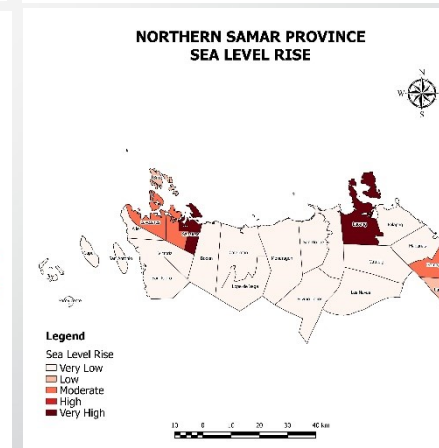
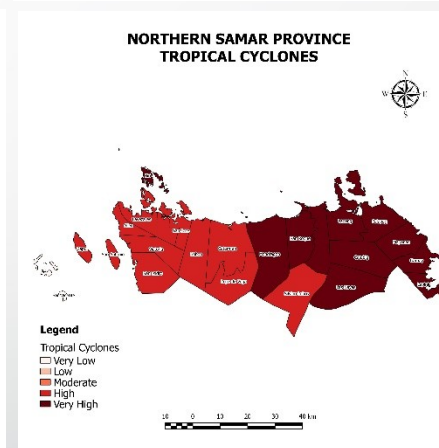
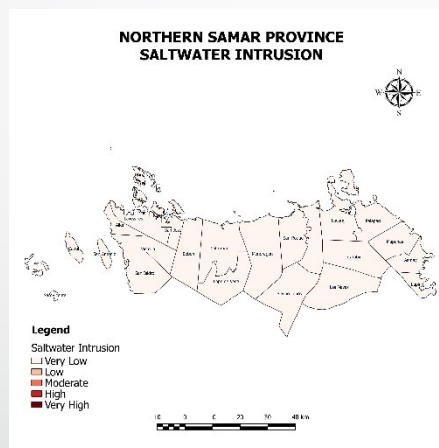
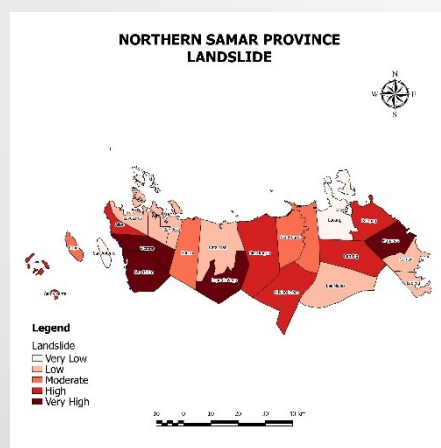
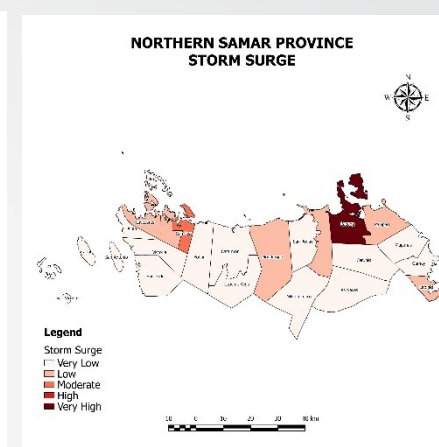
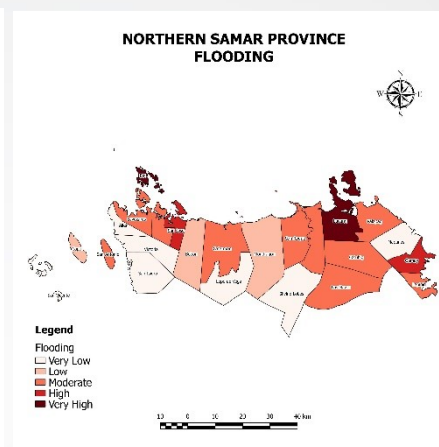
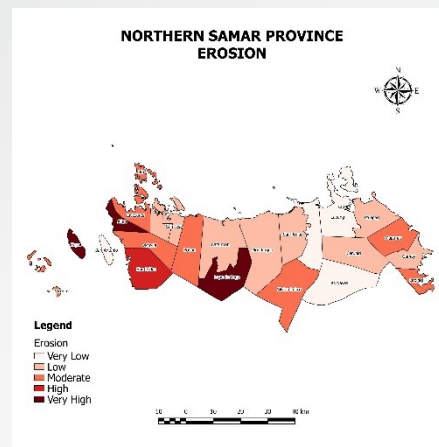
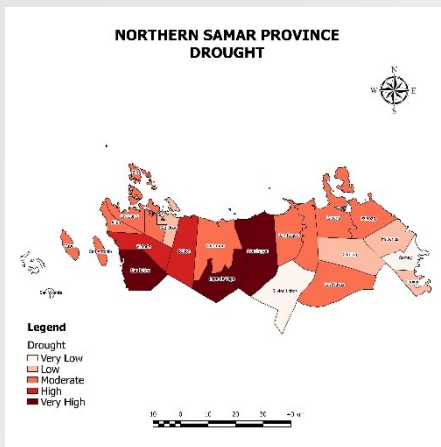
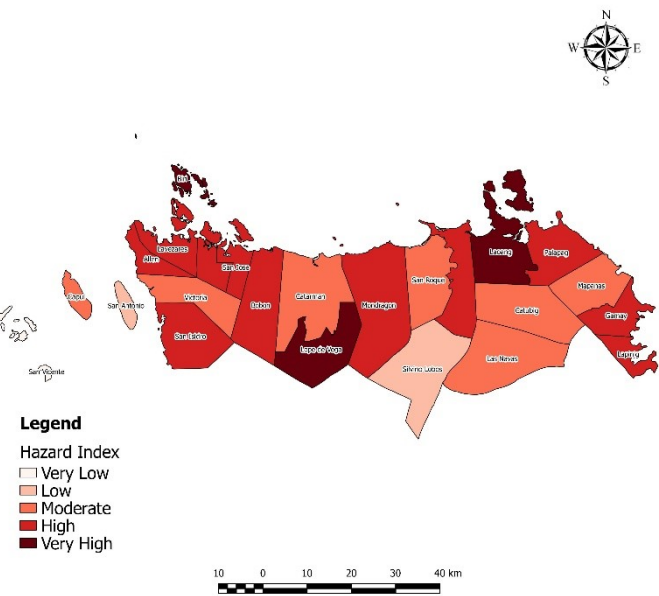
BILIRAN PROVINCE SEA LEVEL RISE



TYPE OF HAZARD PER MUNICIPALITY (PROVINCE OF BILIRAN)

- The municipalities of Naval and Caibiran has the highest hazards index among the municipalities of Biliran province.

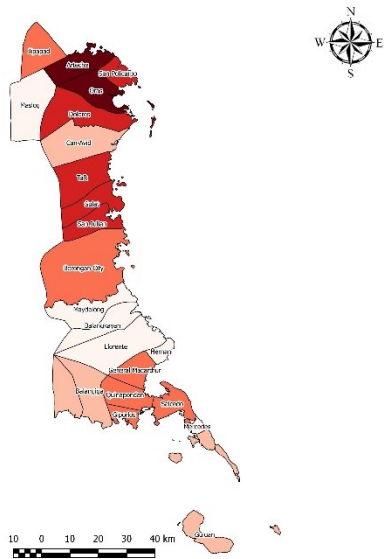
HAZARD INDEX OF NORTHERN SAMAR PROVINCE



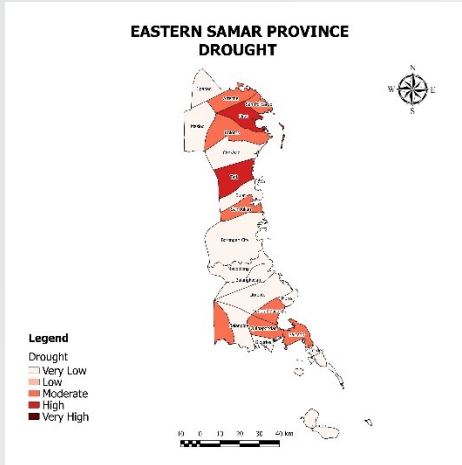
TYPE OF HAZARD PER MUNICIPALITY (PROVINCE OF NORTHERN SAMAR)

- The municipalities of Laoang and Lope de Vega has the highest hazards index among the municipalities of Northern Samar province.

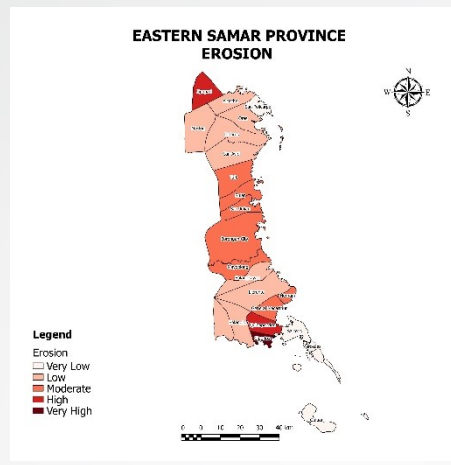
HAZARD INDEX OF EASTERN SAMAR PROVINCE



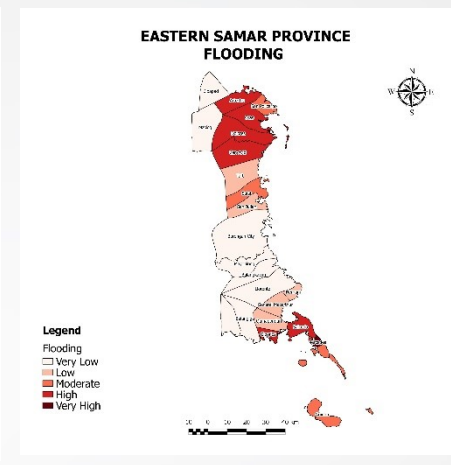
Legend
 Hazard Index
 Very Low
 Low
 Moderate
 High
 Very High



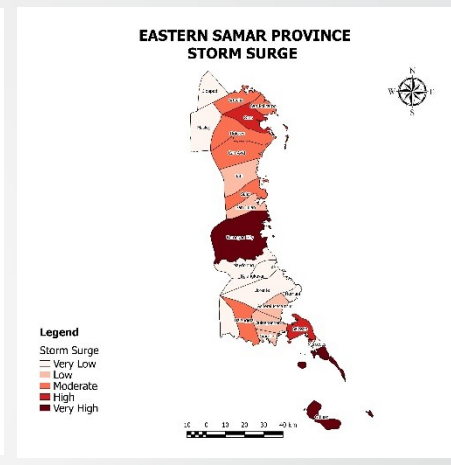
Legend
 Drought
 Very Low
 Low
 Moderate
 High
 Very High



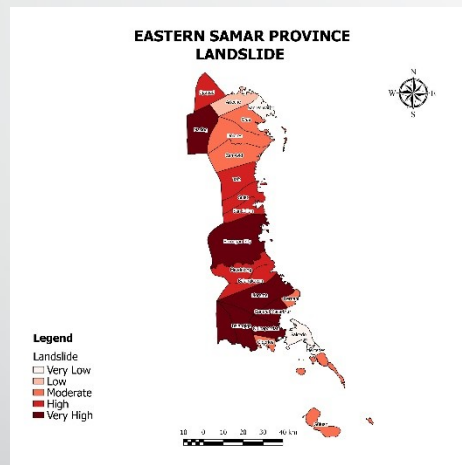
Legend
 Erosion
 Very Low
 Low
 Moderate
 High
 Very High



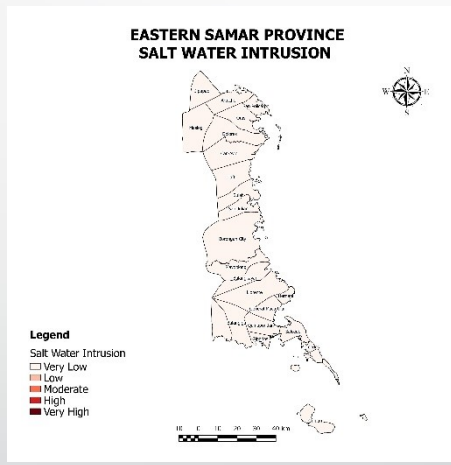
Legend
 Flooding
 Very Low
 Low
 Moderate
 High
 Very High



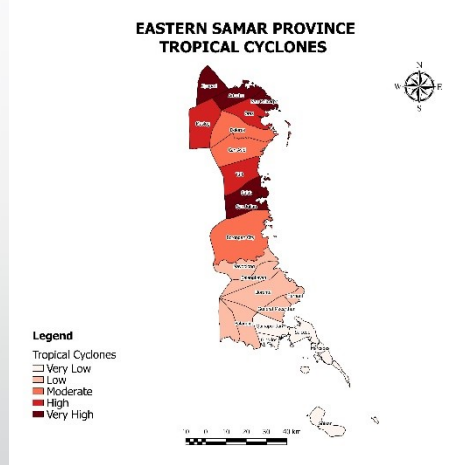
Legend
 Storm Surge
 Very Low
 Low
 Moderate
 High
 Very High



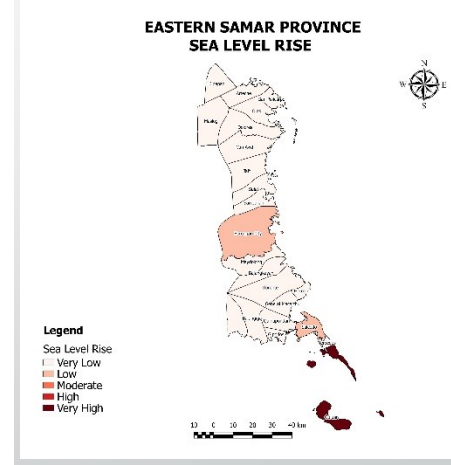
Legend
 Landslide
 Very Low
 Low
 Moderate
 High
 Very High



Legend
 Salt Water Intrusion
 Very Low
 Low
 Moderate
 High
 Very High



Legend
 Tropical Cyclones
 Very Low
 Low
 Moderate
 High
 Very High



Legend
 Sea Level Rise
 Very Low
 Low
 Moderate
 High
 Very High

TYPE OF HAZARD PER MUNICIPALITY (PROVINCE OF EASTERN SAMAR)

- The municipalities of Oras and Arteche has the highest hazards index among the municipalities of Eastern Samar province.

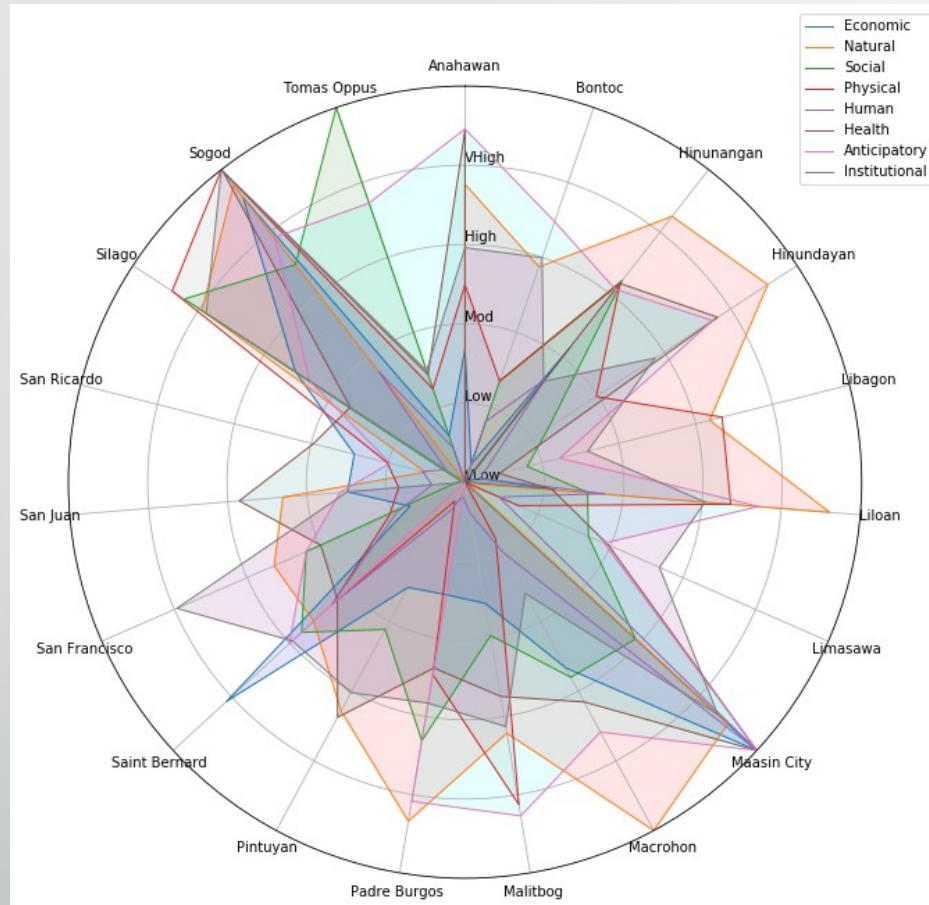
DATA ON ADAPTIVE CAPACITY

ADAPTIVE CAPACITY INDICATORS	TOTAL # OF PARAMETERS	PARAMETERS FROM LGU
1. ECONOMIC CAPITAL	12	7
2. NATURAL CAPITAL	4	2
3. SOCIAL CAPITAL	5	3
4. PHYSICAL CAPITAL	7	7
5. HUMAN CAPITAL	5	0
6. HEALTH CAPITAL	13	4
7. ANTICIPATORY CAPITAL	6	6
8. INSTITUTIONAL CAPITAL	6	6

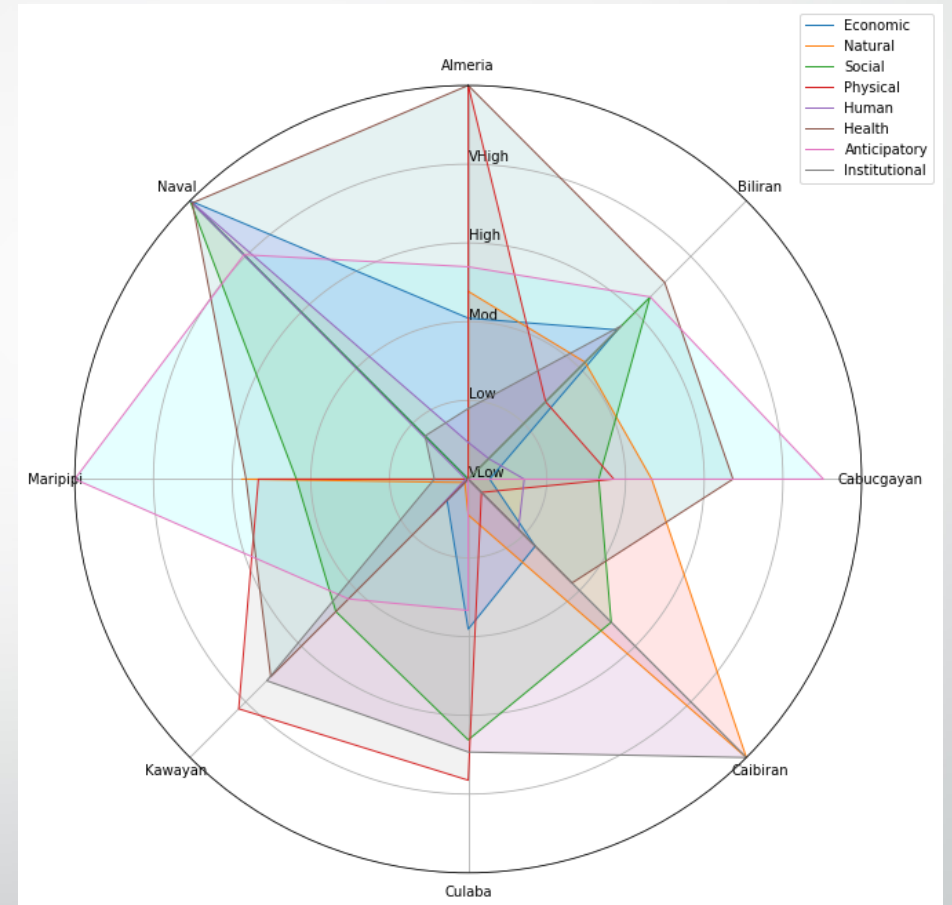
DATA COLLECTION STATUS

PROVINCE	ADAPTIVE CAPACITY	Municipalities without Adaptive Capacity Data
SOUTHERN LEYTE	100 %	100%
BILIRAN	100 %	100%
NORTHERN SAMAR	67 %	Capul, Gamay, Lapinig, Las Navas, Pambujan, San Vicente, Silvino Lobos, and Biri
EASTERN SAMAR	83 %	Balangiga, Balangkayan (Incomplete), General Macarthur, and Maslog

ADAPTIVE CAPACITIES BY PROVINCE

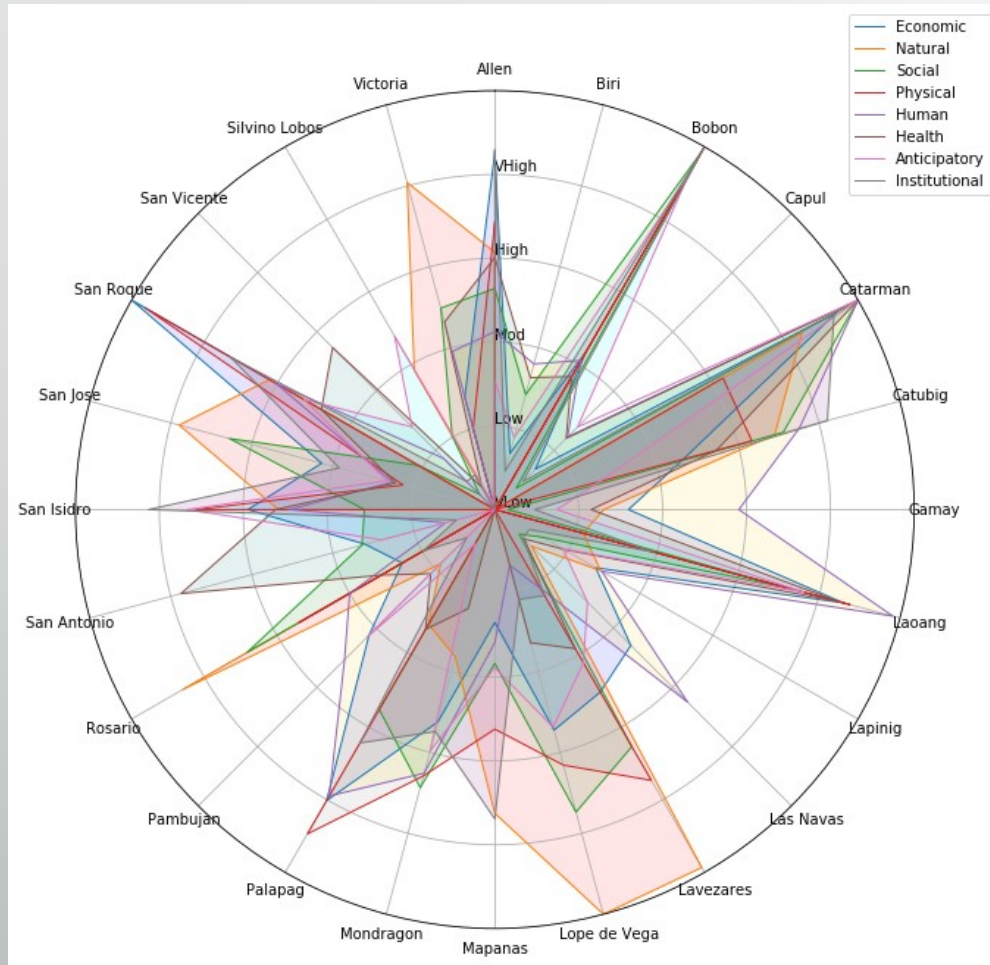


SOUTHERN LEYTE

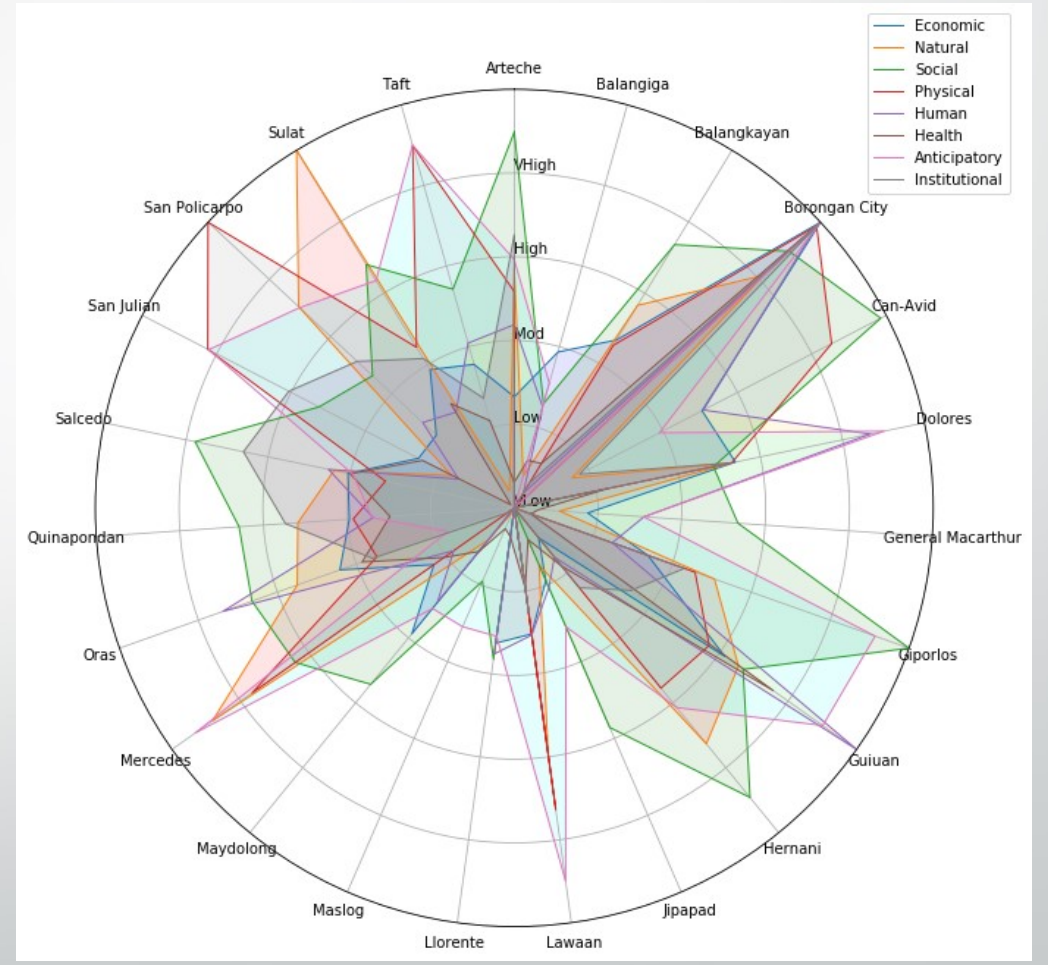


BILIRAN

ADAPTIVE CAPACITIES BY PROVINCE



NORTHERN SAMAR

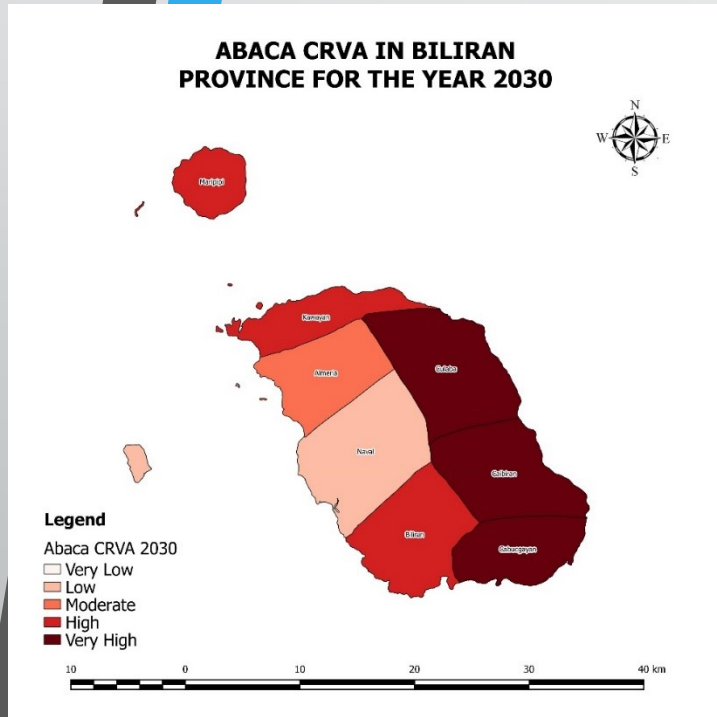


EASTERN SAMAR

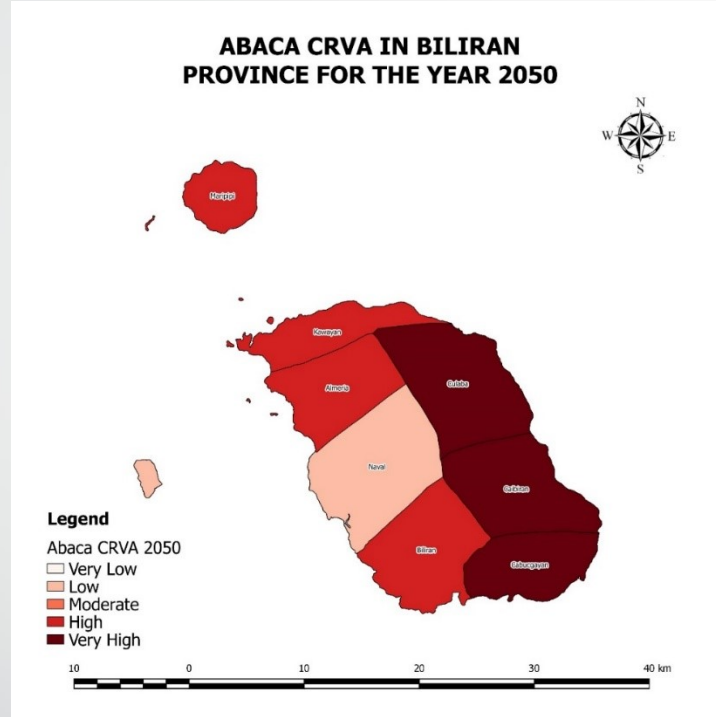


CRVA RESULT FOR THE PROVINCES OF
SOUTHERN LEYTE, BILIRAN, NORTHERN SAMAR
AND EASTERN SAMAR

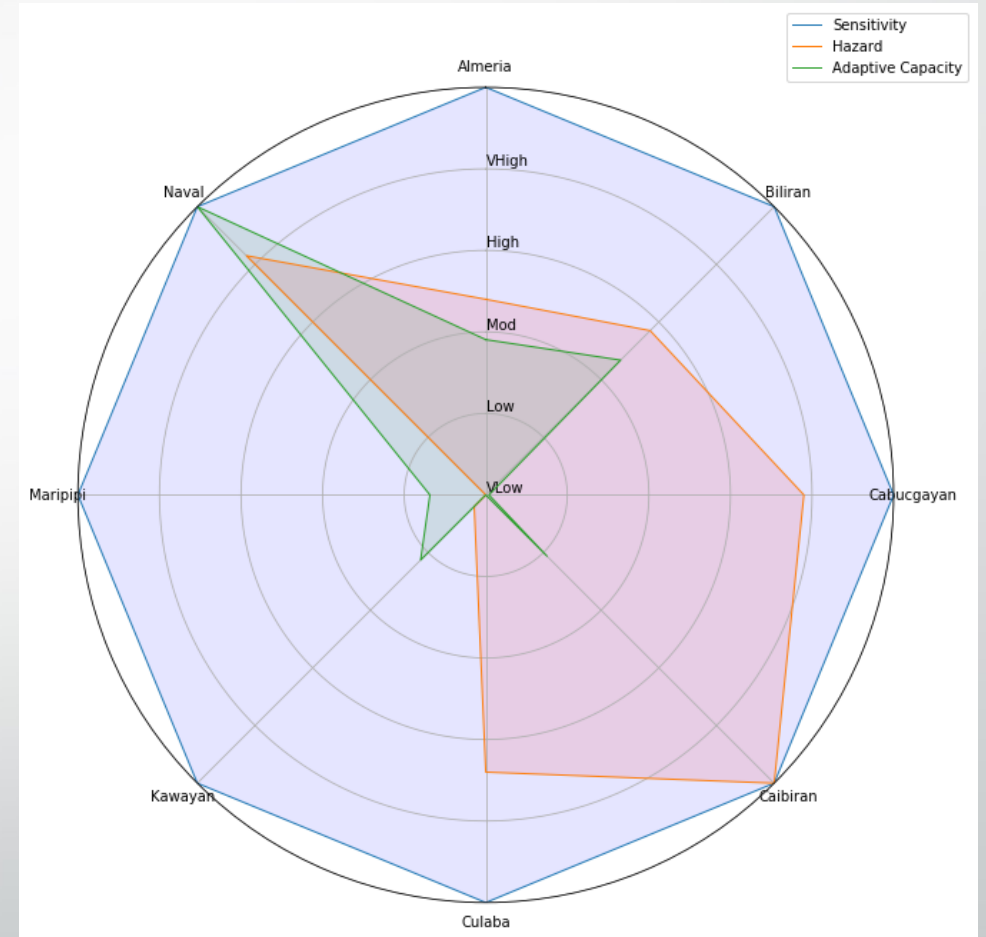
CRVA FOR ABACA (BILIRAN PROVINCE)



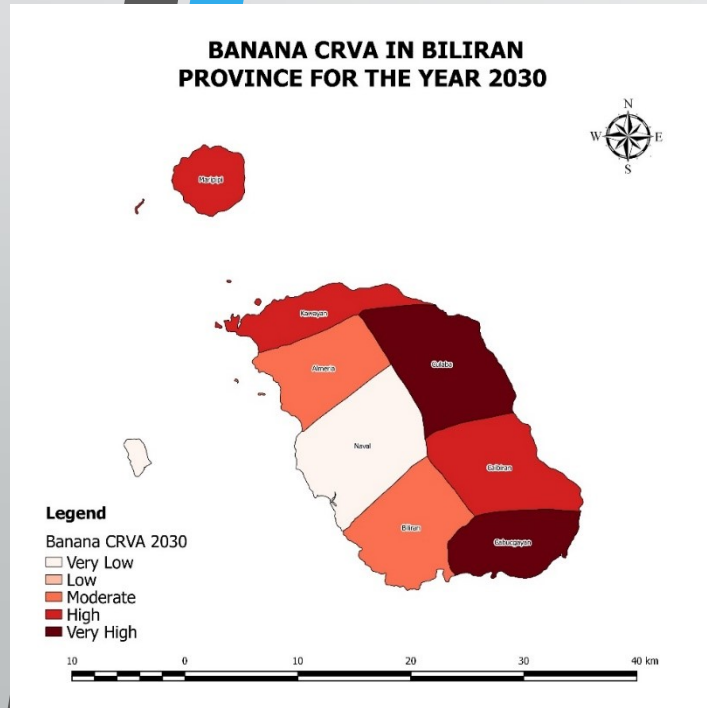
CRVA 2030



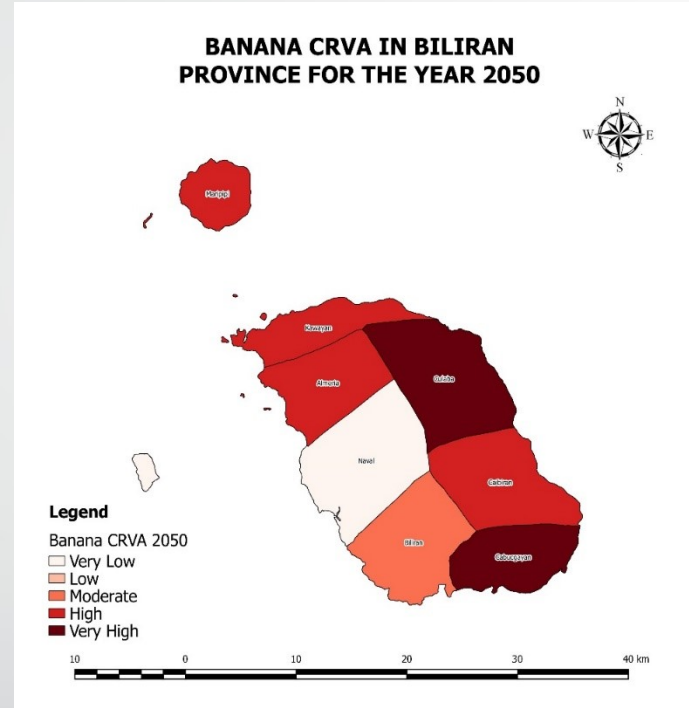
CRVA 2050



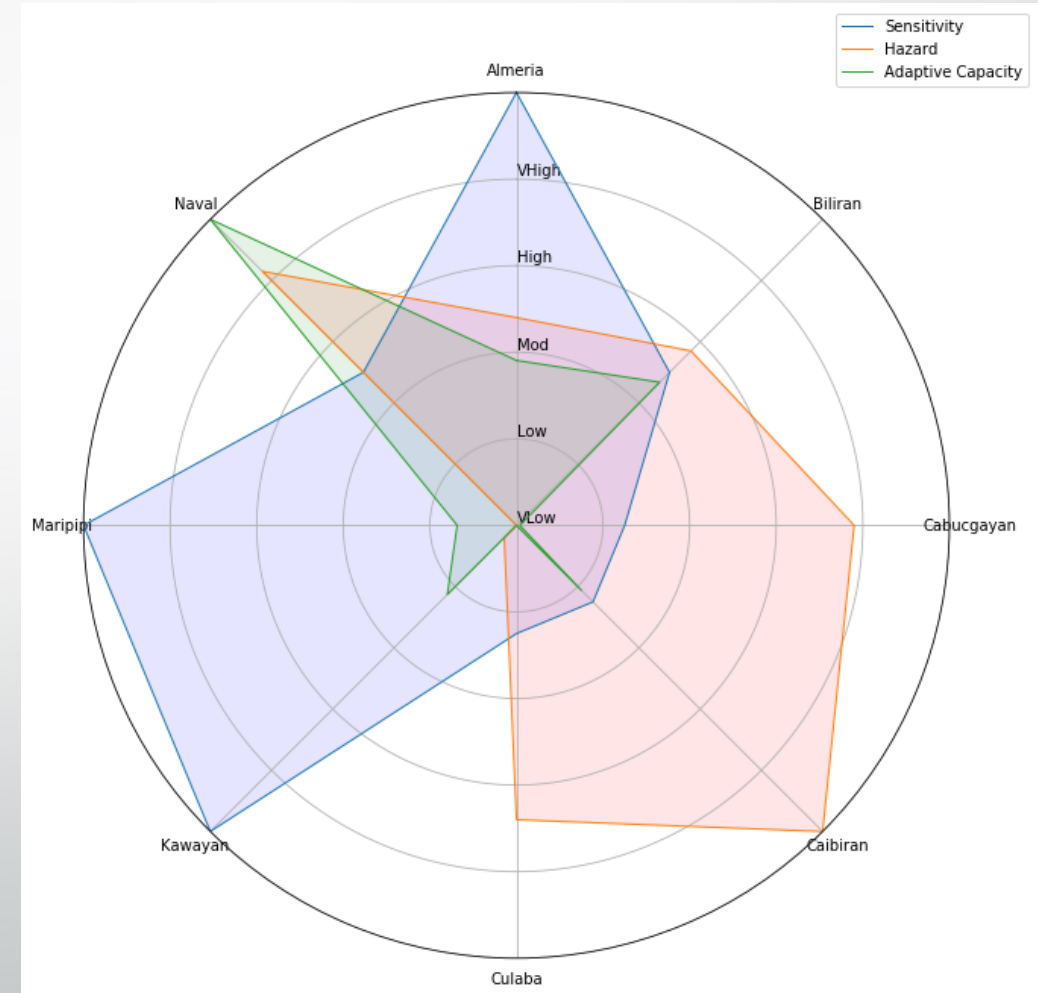
CRVA FOR BANANA (BILIRAN PROVINCE)



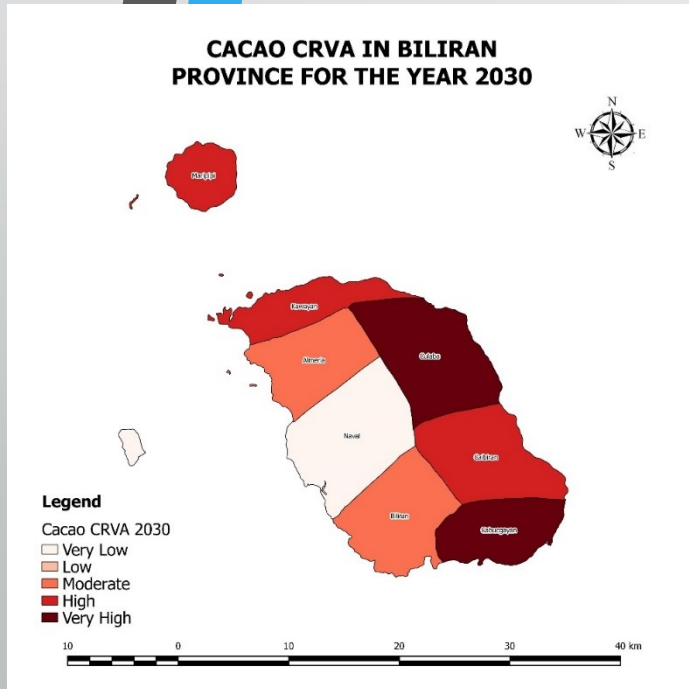
CRVA 2030



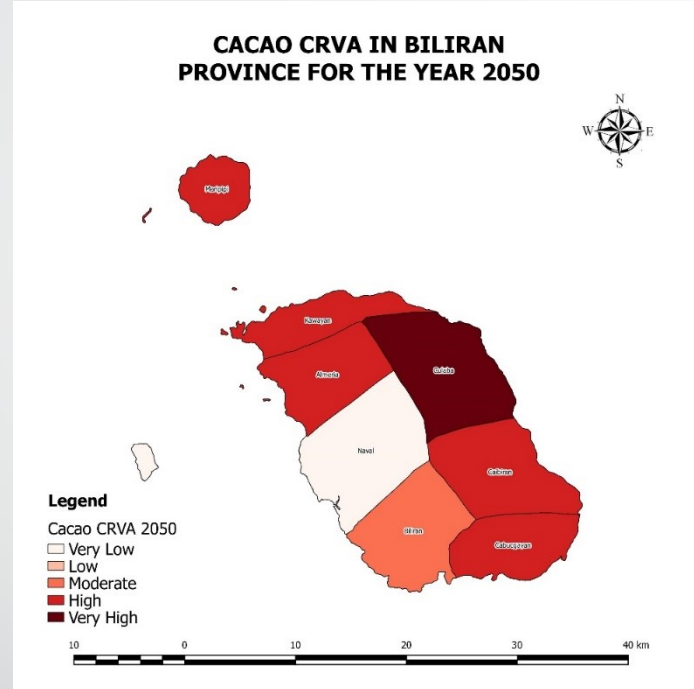
CRVA 2050



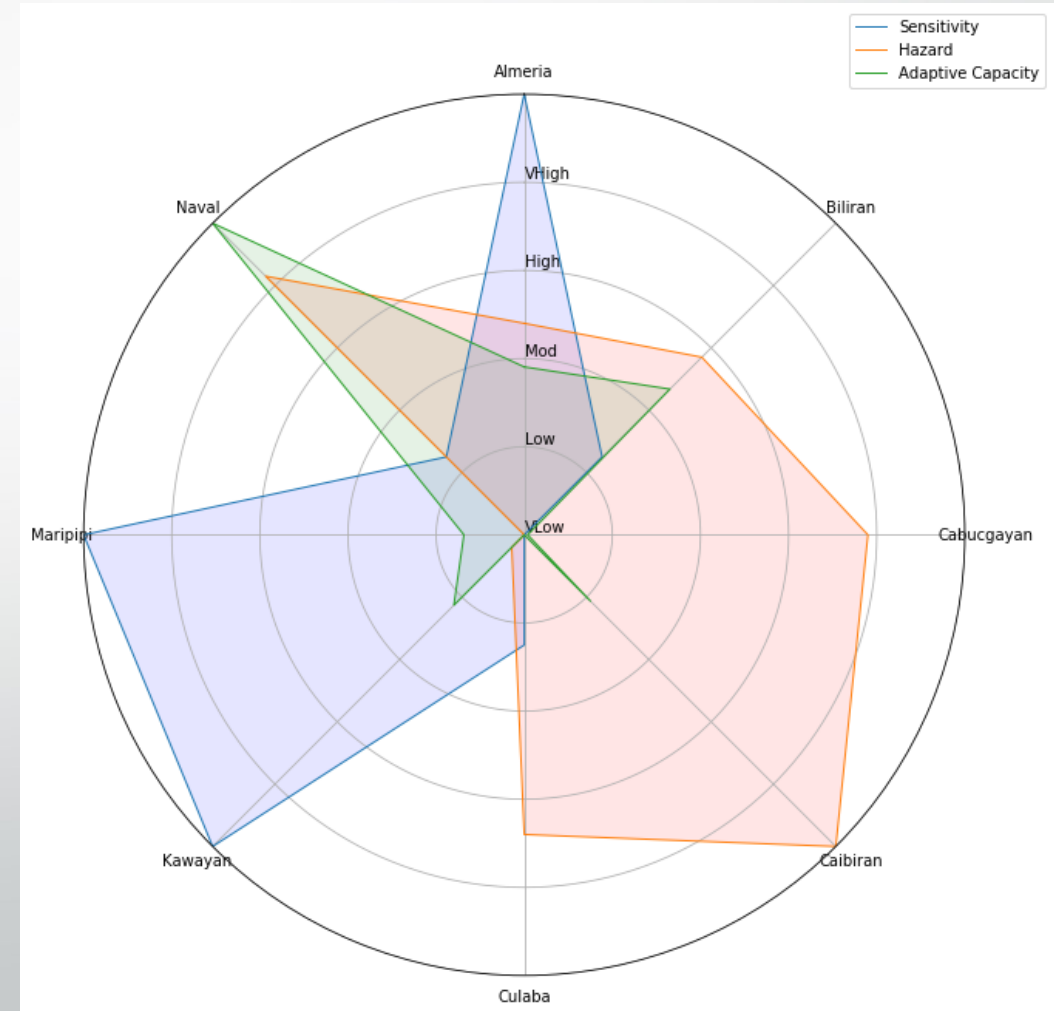
CRVA FOR CACAO (BILIRAN PROVINCE)



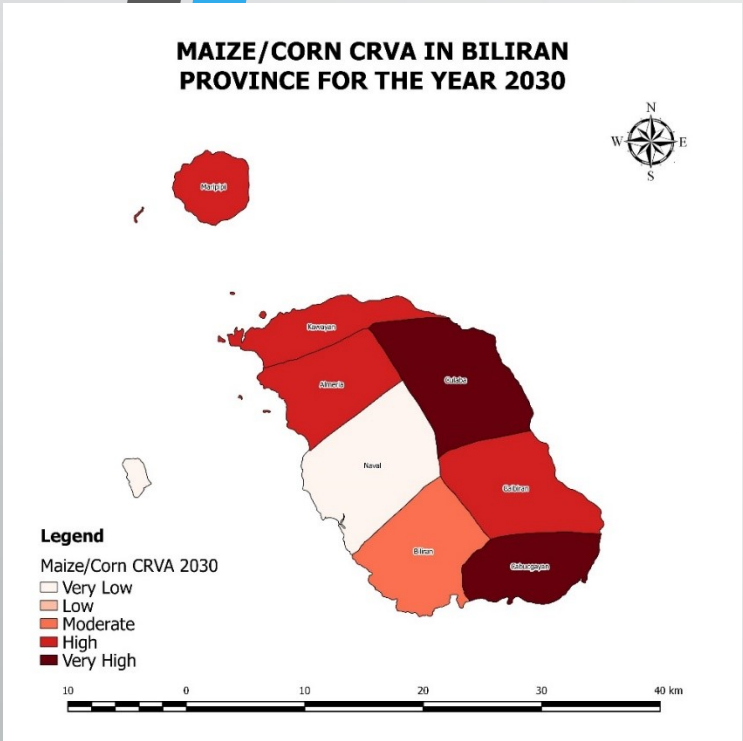
CRVA 2030



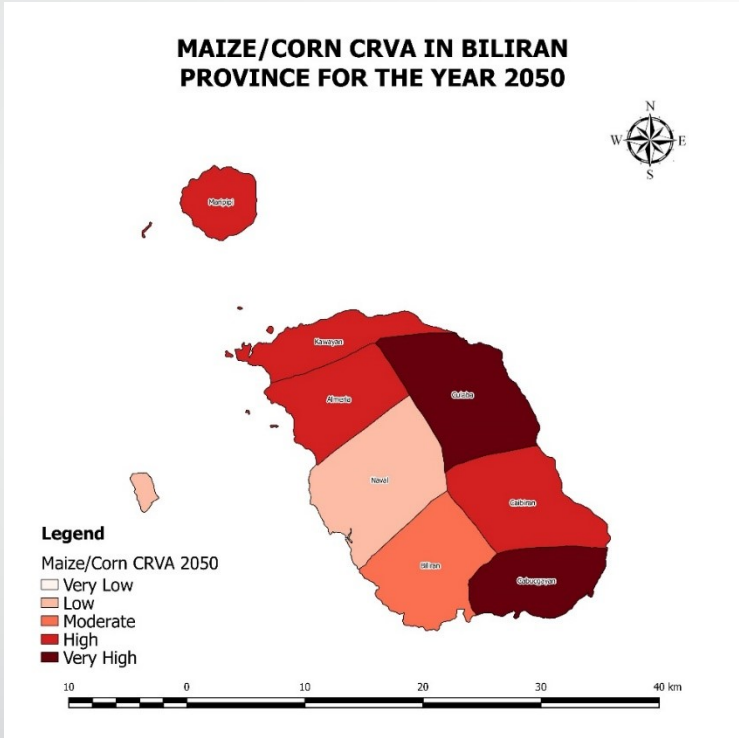
CRVA 2050



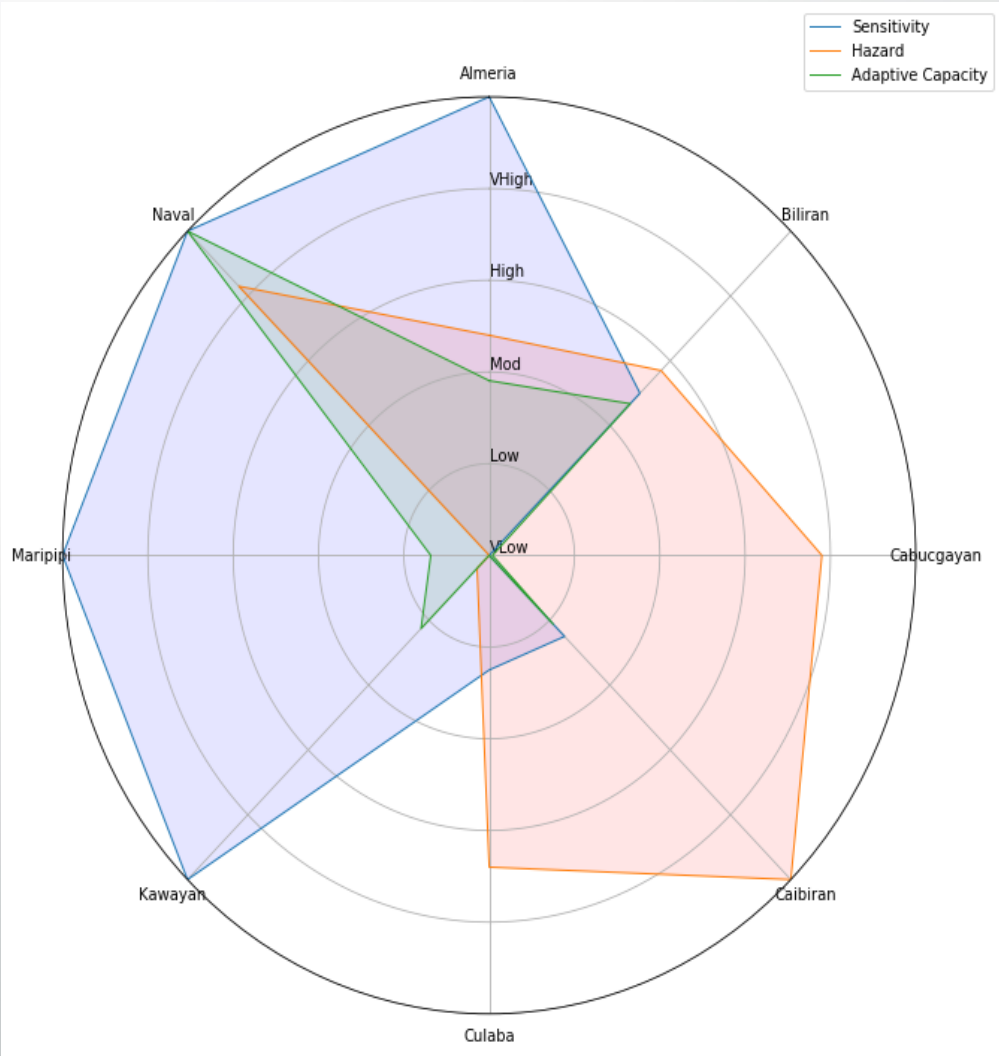
CRVA FOR CORN (BILIRAN PROVINCE)



CRVA 2030

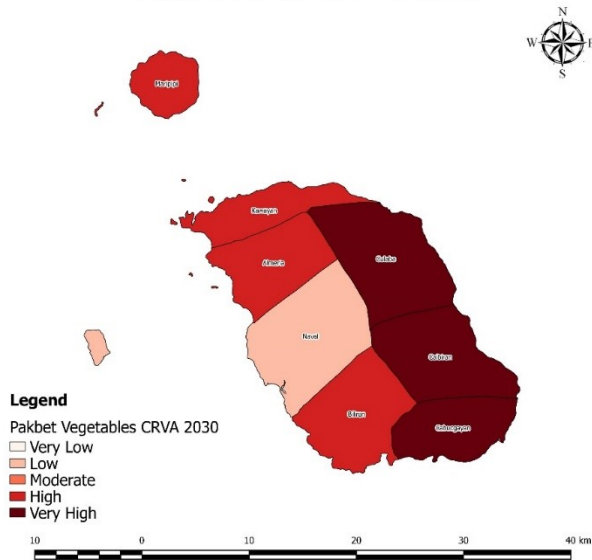


CRVA 2050



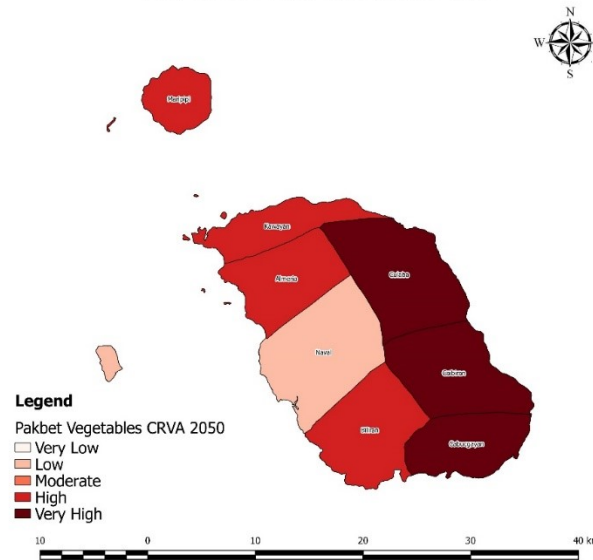
CRVA FOR PAKBET (BILIRAN PROVINCE)

PAKBET VEGETABLES CRVA IN BILIRAN PROVINCE FOR THE YEAR 2030

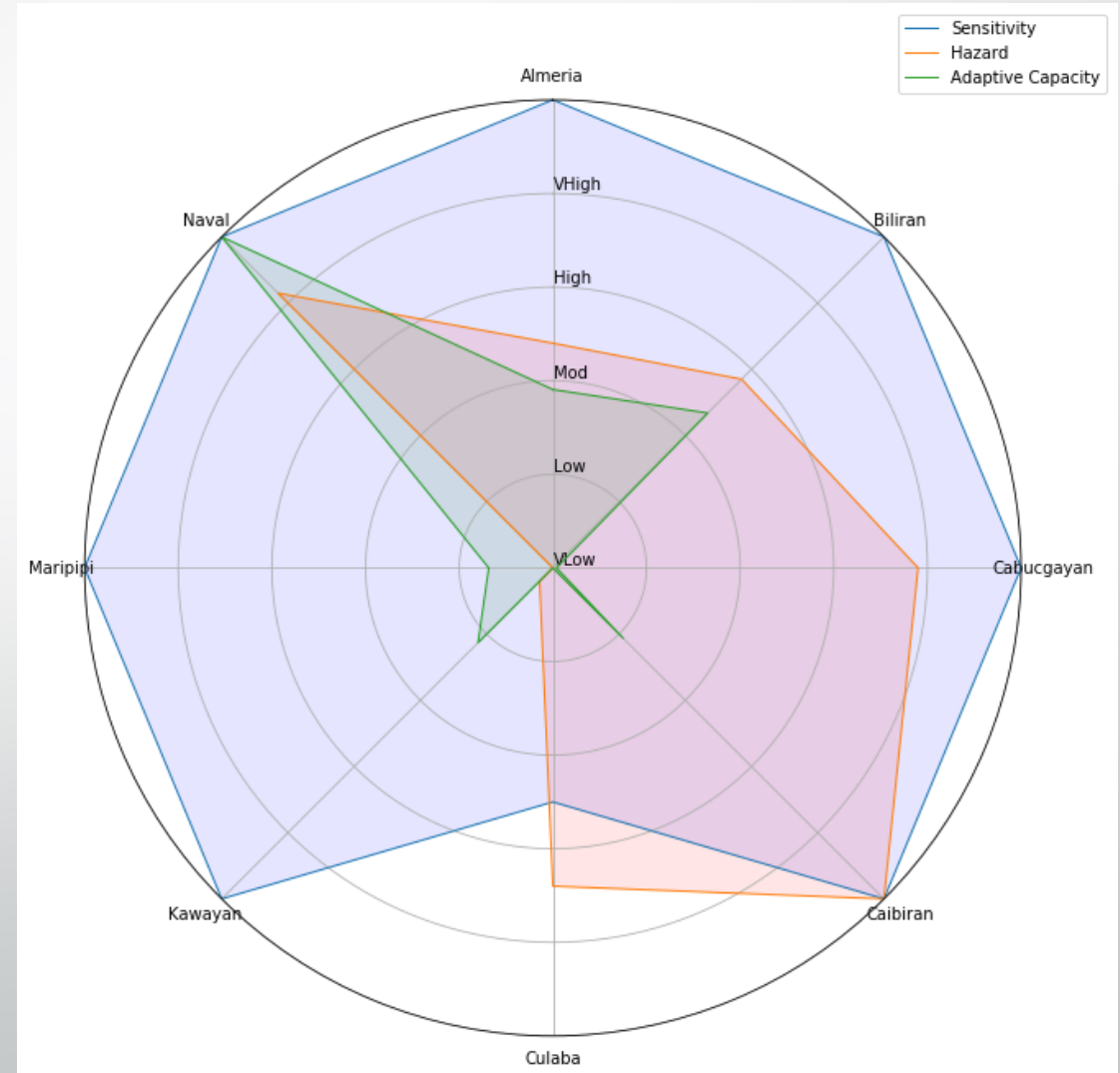


CRVA 2030

PAKBET VEGETABLES CRVA IN BILIRAN PROVINCE FOR THE YEAR 2050

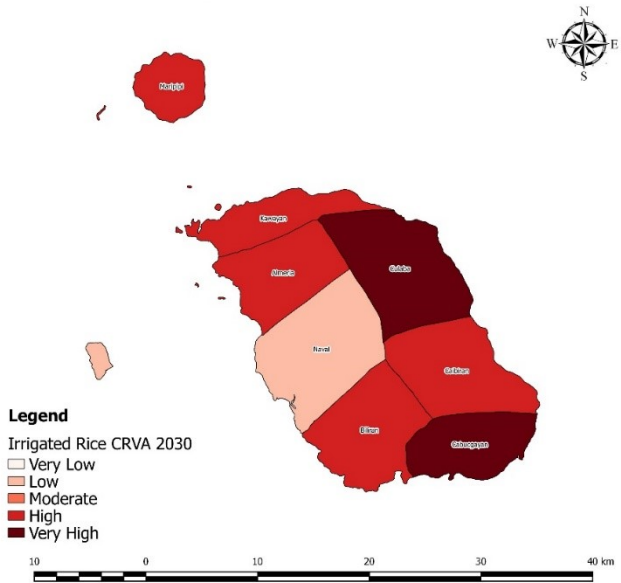


CRVA 2050



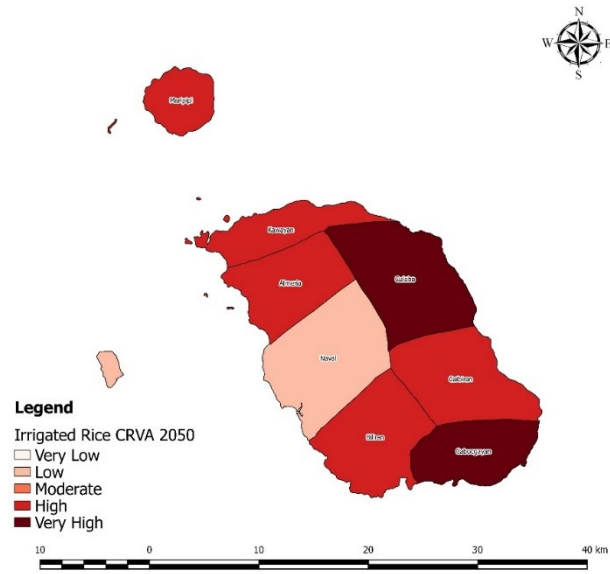
CRVA FOR IRRIGATED RICE (BILIRAN PROVINCE)

IRRIGATED RICE CRVA IN BILIRAN PROVINCE FOR THE YEAR 2030

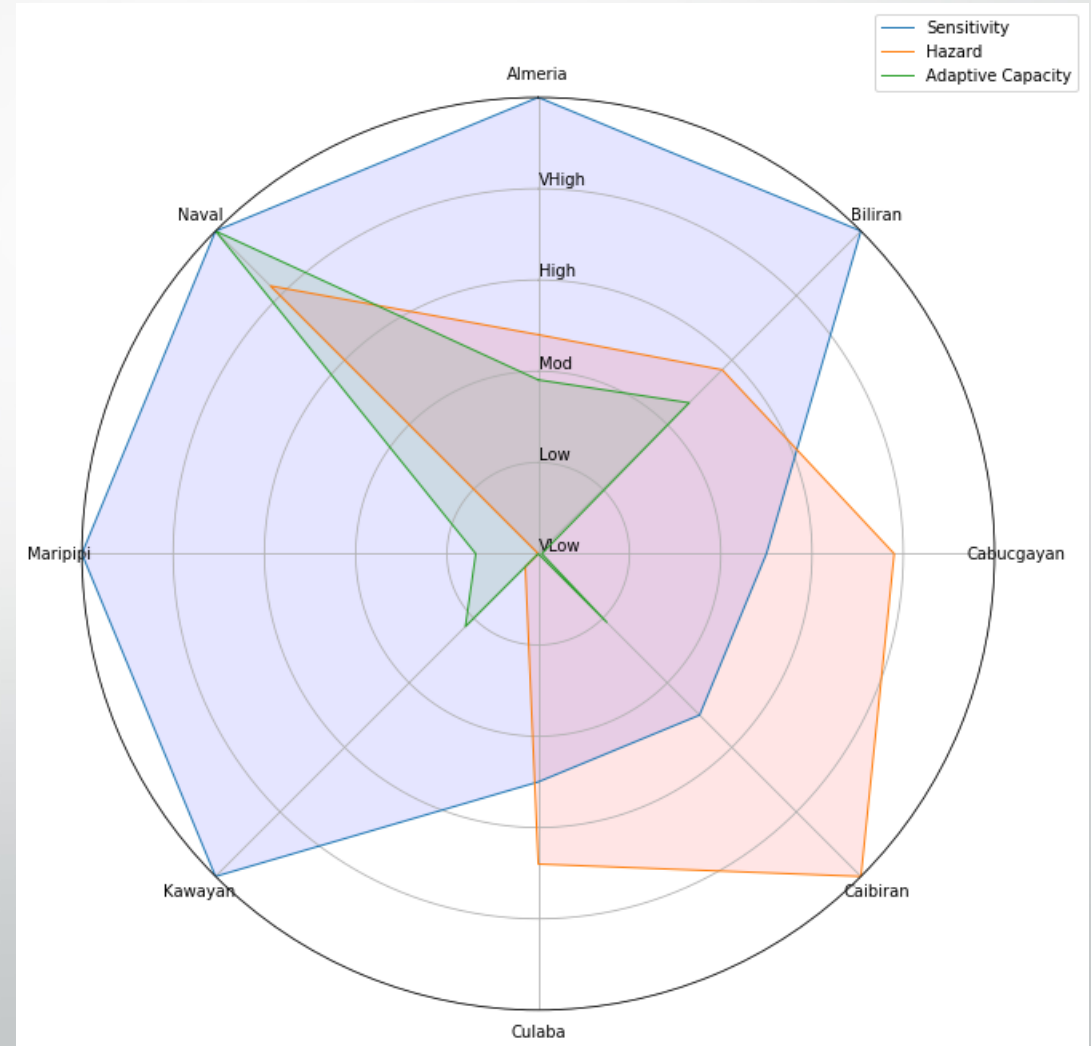


CRVA 2030

IRRIGATED RICE CRVA IN BILIRAN PROVINCE FOR THE YEAR 2050

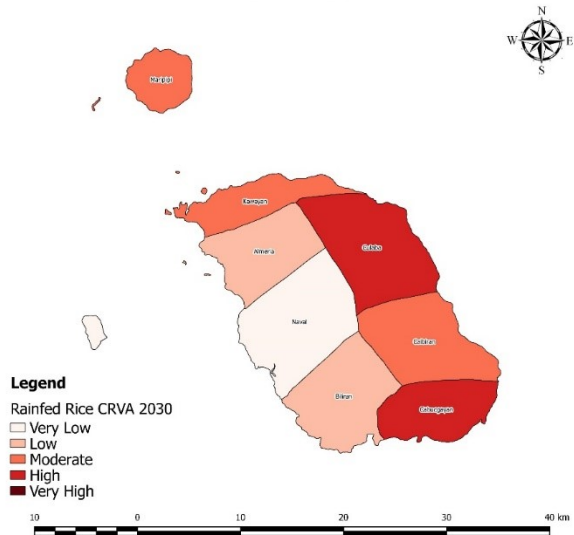


CRVA 2050



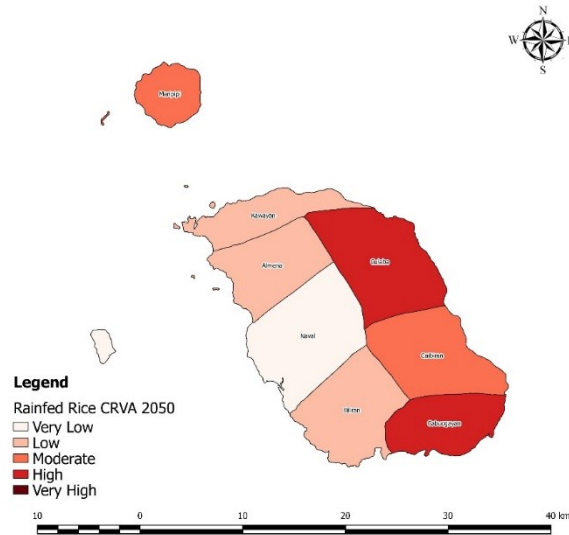
CRVA FOR RAINFED RICE (BILIRAN PROVINCE)

RAINFED RICE CRVA IN BILIRAN PROVINCE FOR THE YEAR 2030

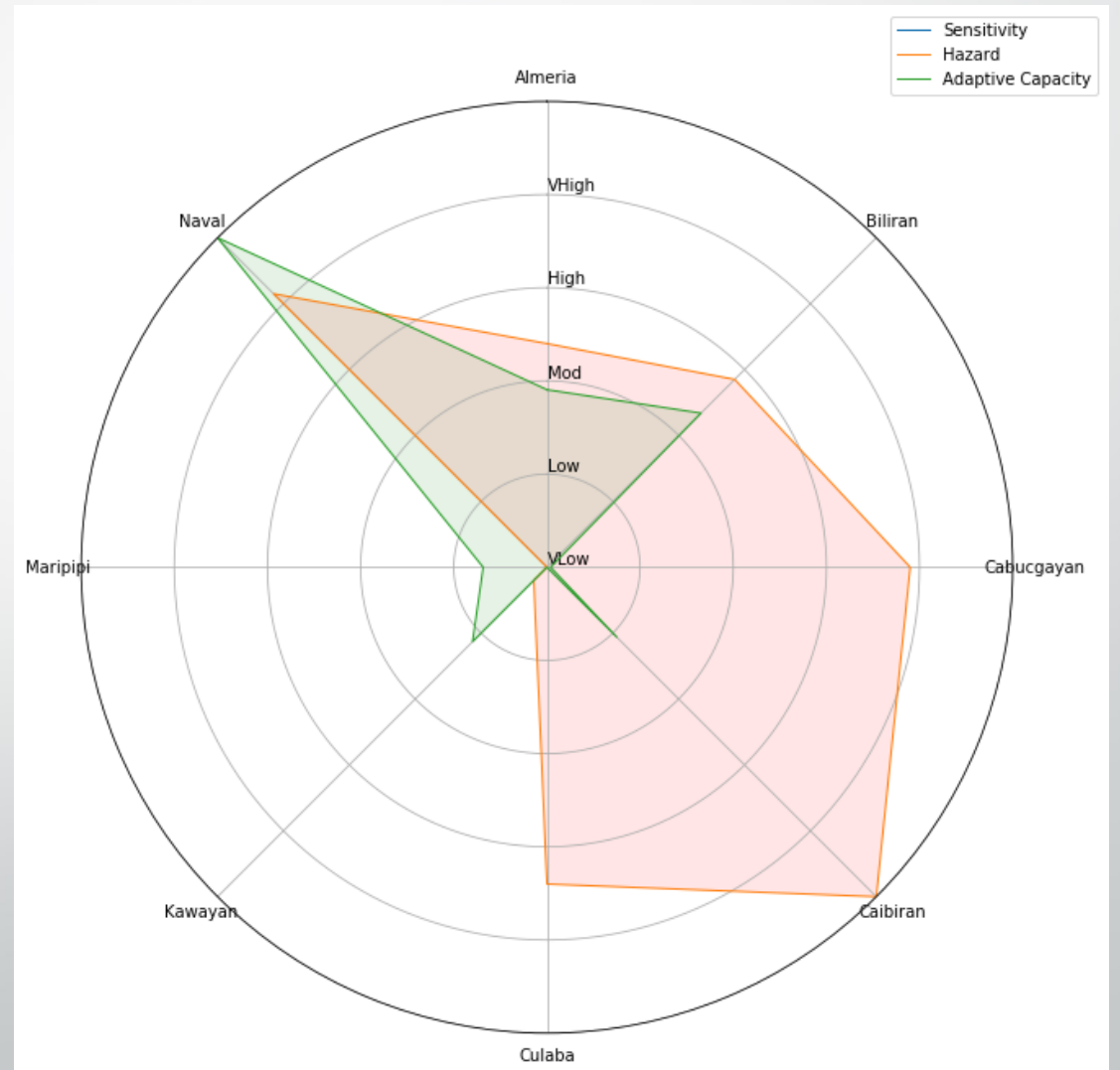


CRVA 2030

RAINFED RICE CRVA IN BILIRAN PROVINCE FOR THE YEAR 2050

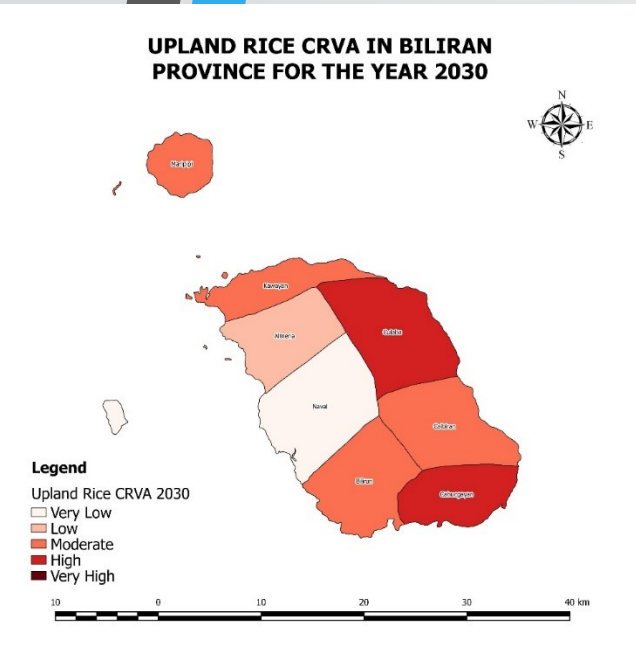


CRVA 2050



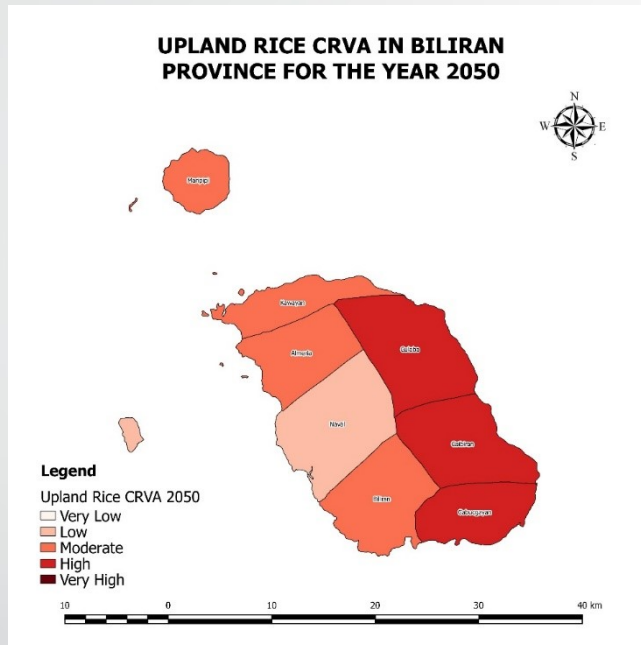
CRVA FOR UPLAND RICE (BILIRAN PROVINCE)

UPLAND RICE CRVA IN BILIRAN PROVINCE FOR THE YEAR 2030

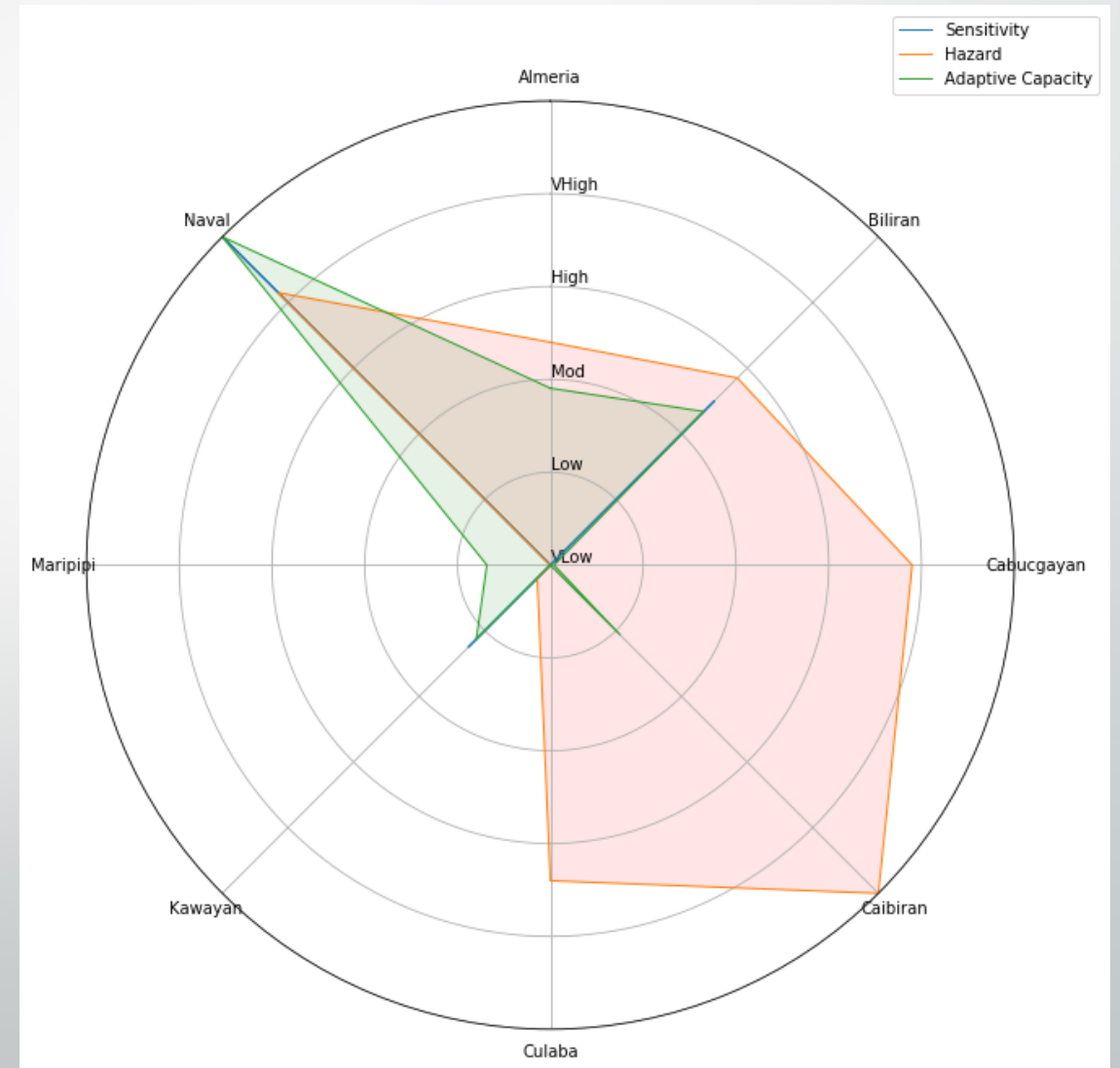


CRVA 2030

UPLAND RICE CRVA IN BILIRAN PROVINCE FOR THE YEAR 2050

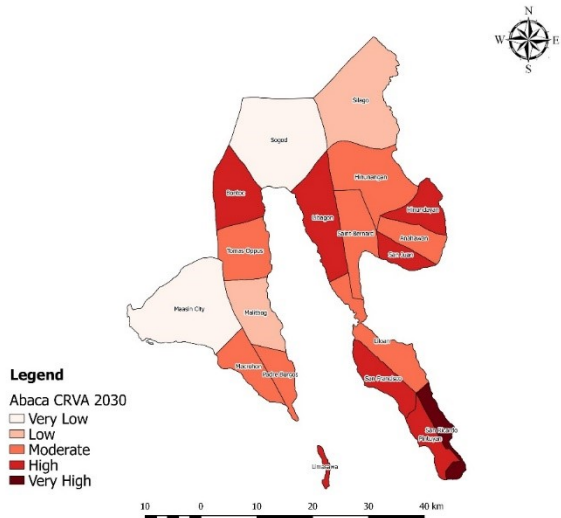


CRVA 2050



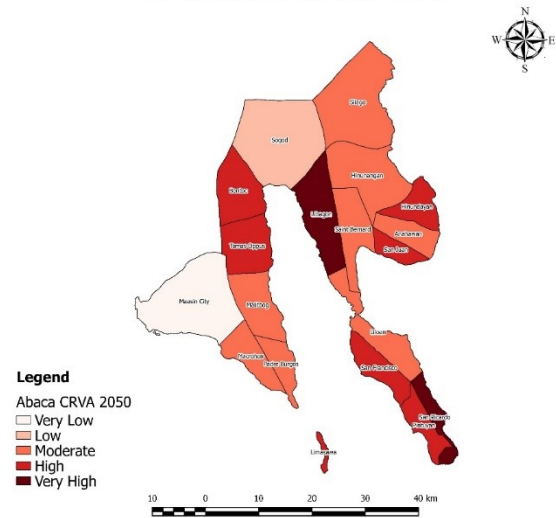
CRVA FOR ABACA (SOUTHERN LEYTE PROVINCE)

ABACA CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

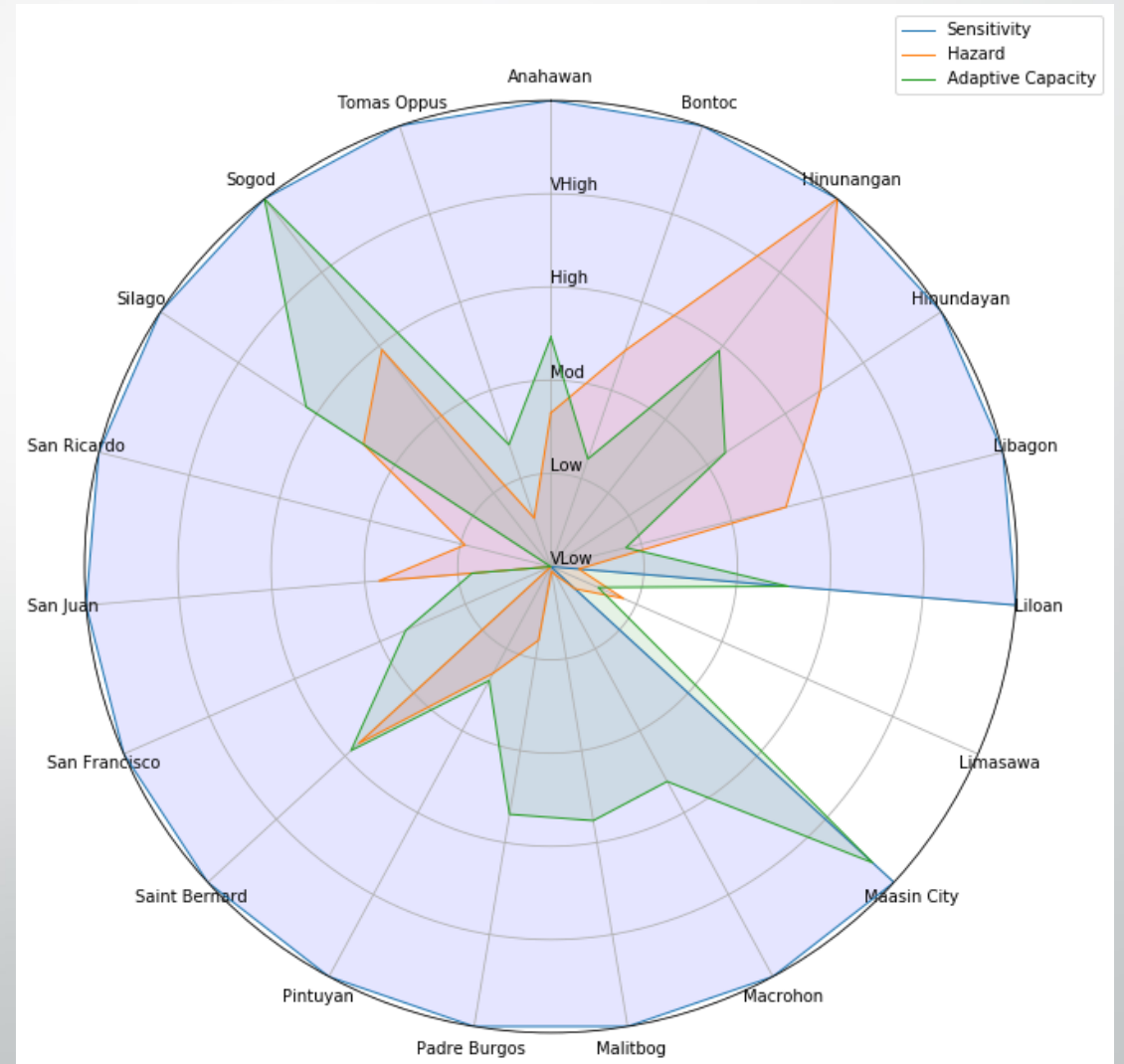


CRVA 2030

ABACA CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050

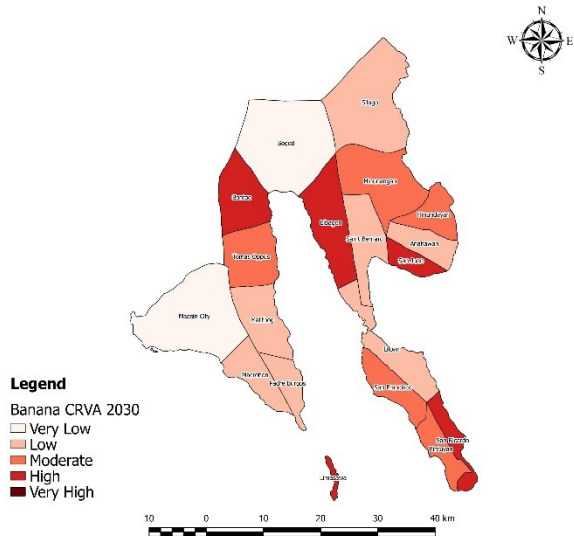


CRVA 2050



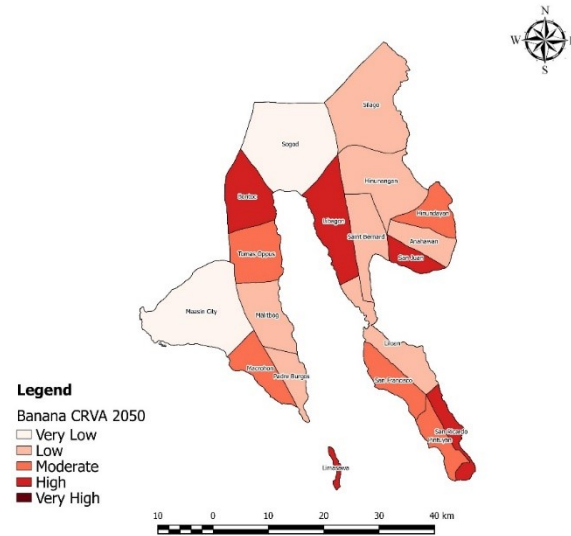
CRVA FOR BANANA (SOUTHERN LEYTE PROVINCE)

BANANA CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

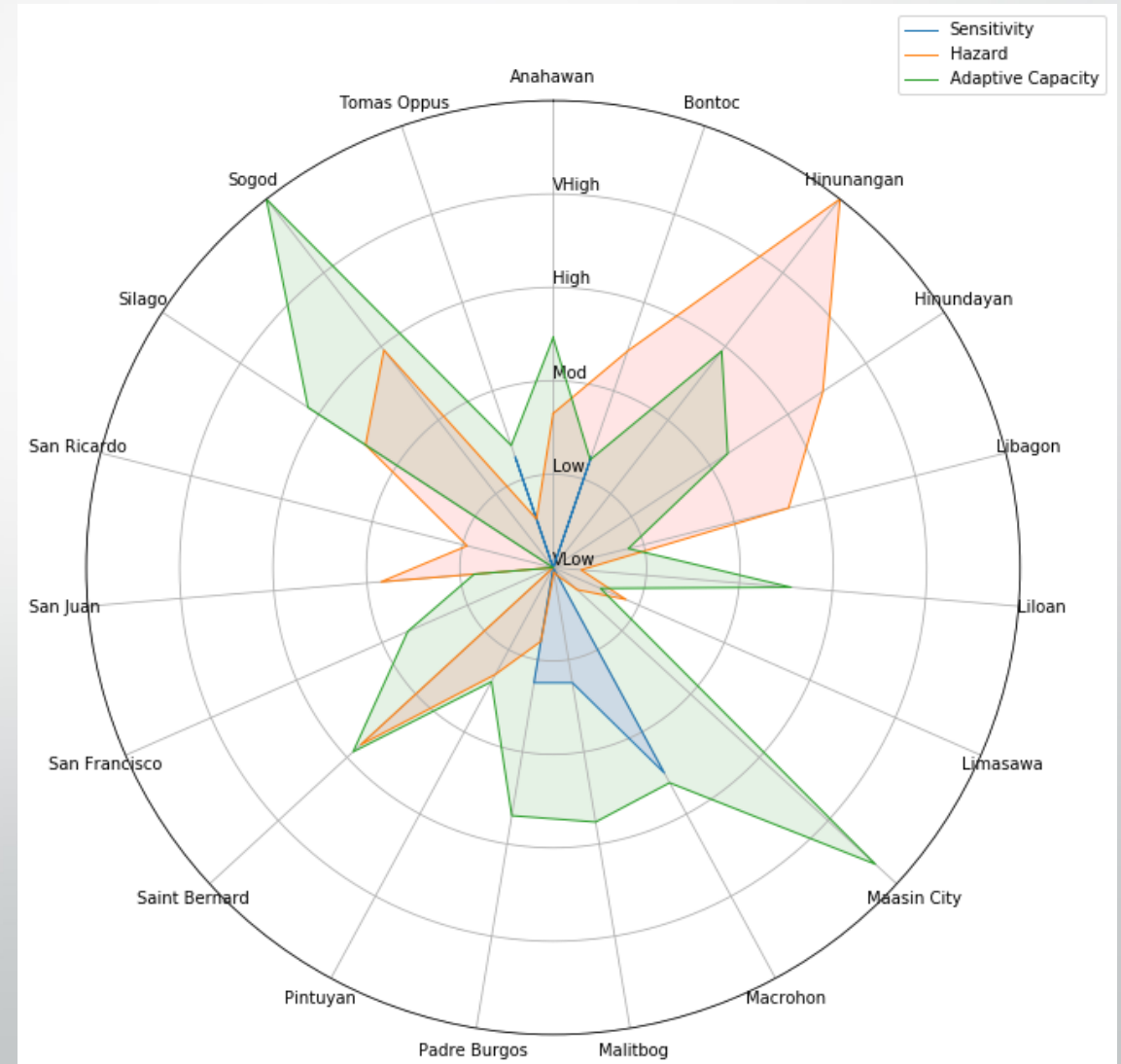


CRVA 2030

BANANA CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050

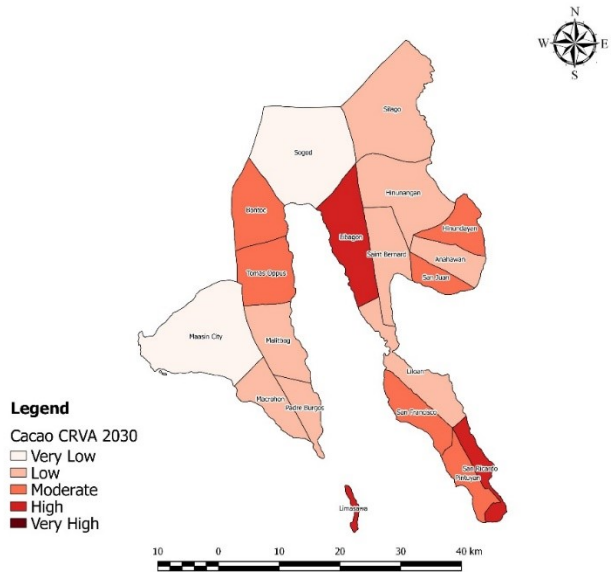


CRVA 2050

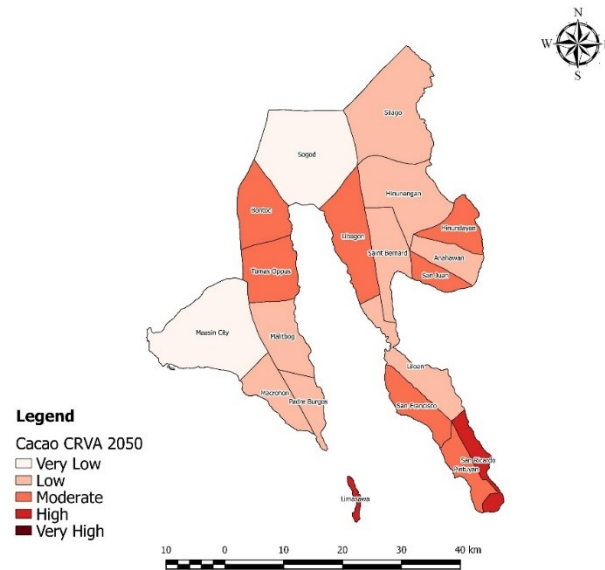


CRVA FOR CACAO (SOUTHERN LEYTE PROVINCE)

CACAO CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

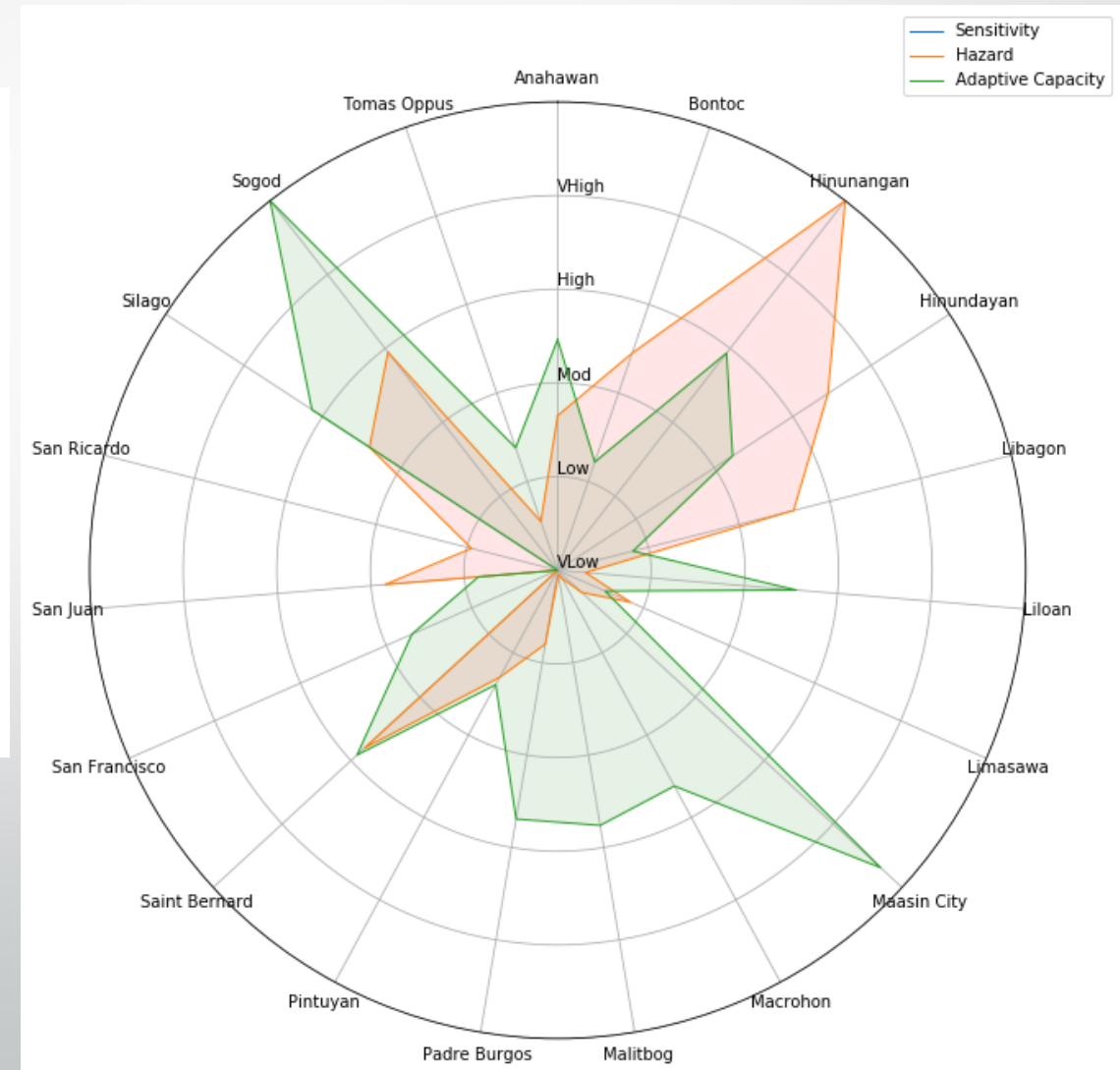


CACAO CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050



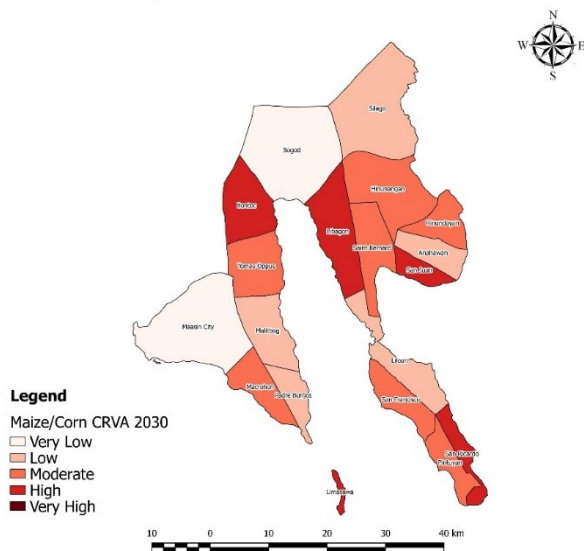
CRVA 2030

CRVA 2050



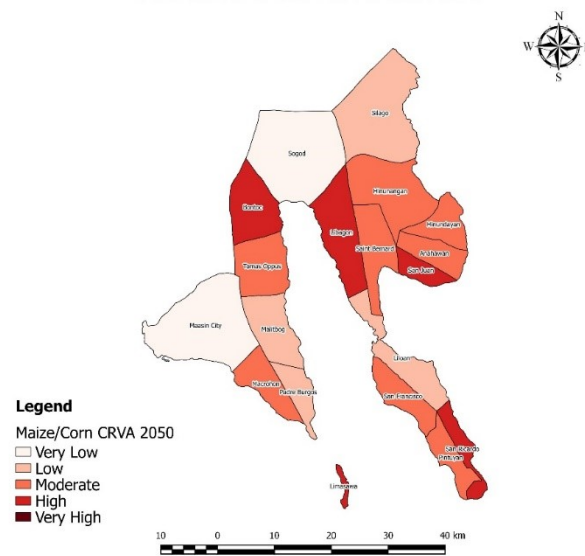
CRVA FOR CORN (SOUTHERN LEYTE PROVINCE)

MAIZE/CORN CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

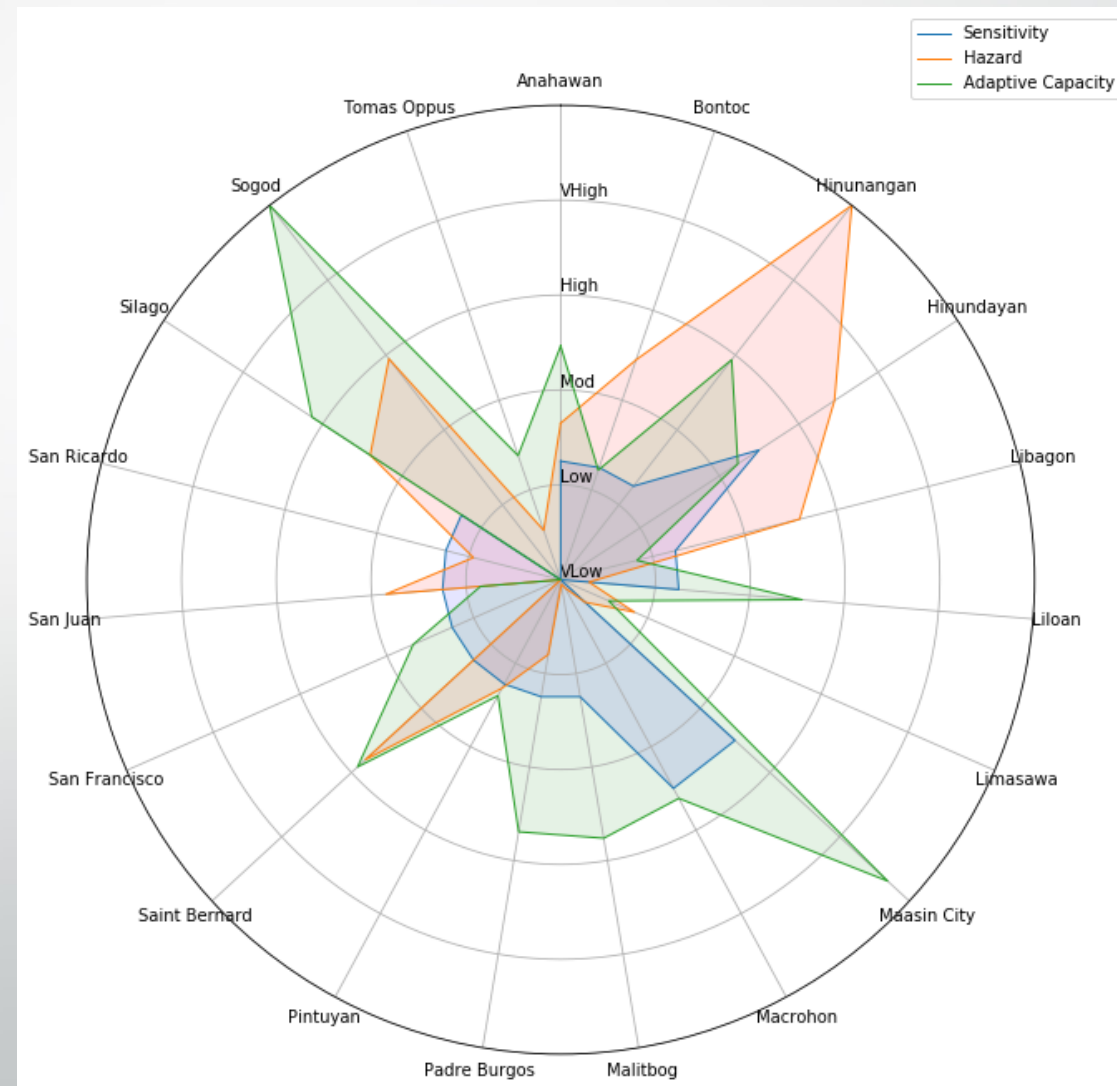


CRVA 2030

MAIZE/CORN CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050

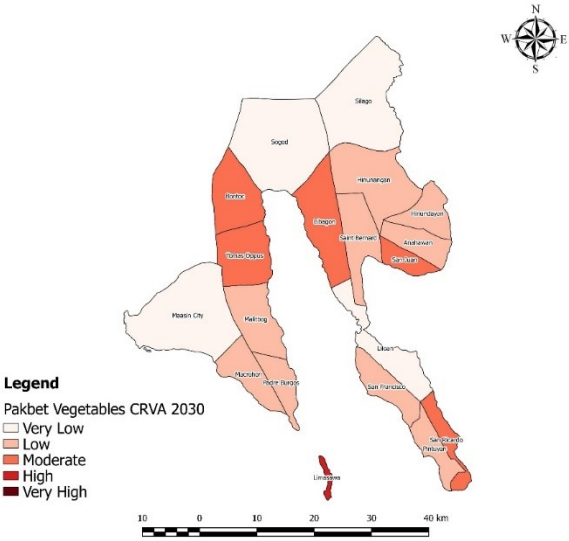


CRVA 2050

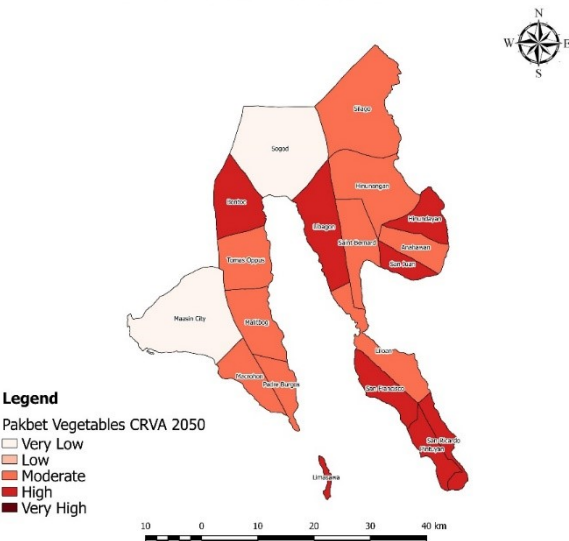


CRVA FOR PAKBET (SOUTHERN LEYTE PROVINCE)

PAKBET VEGETABLES CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

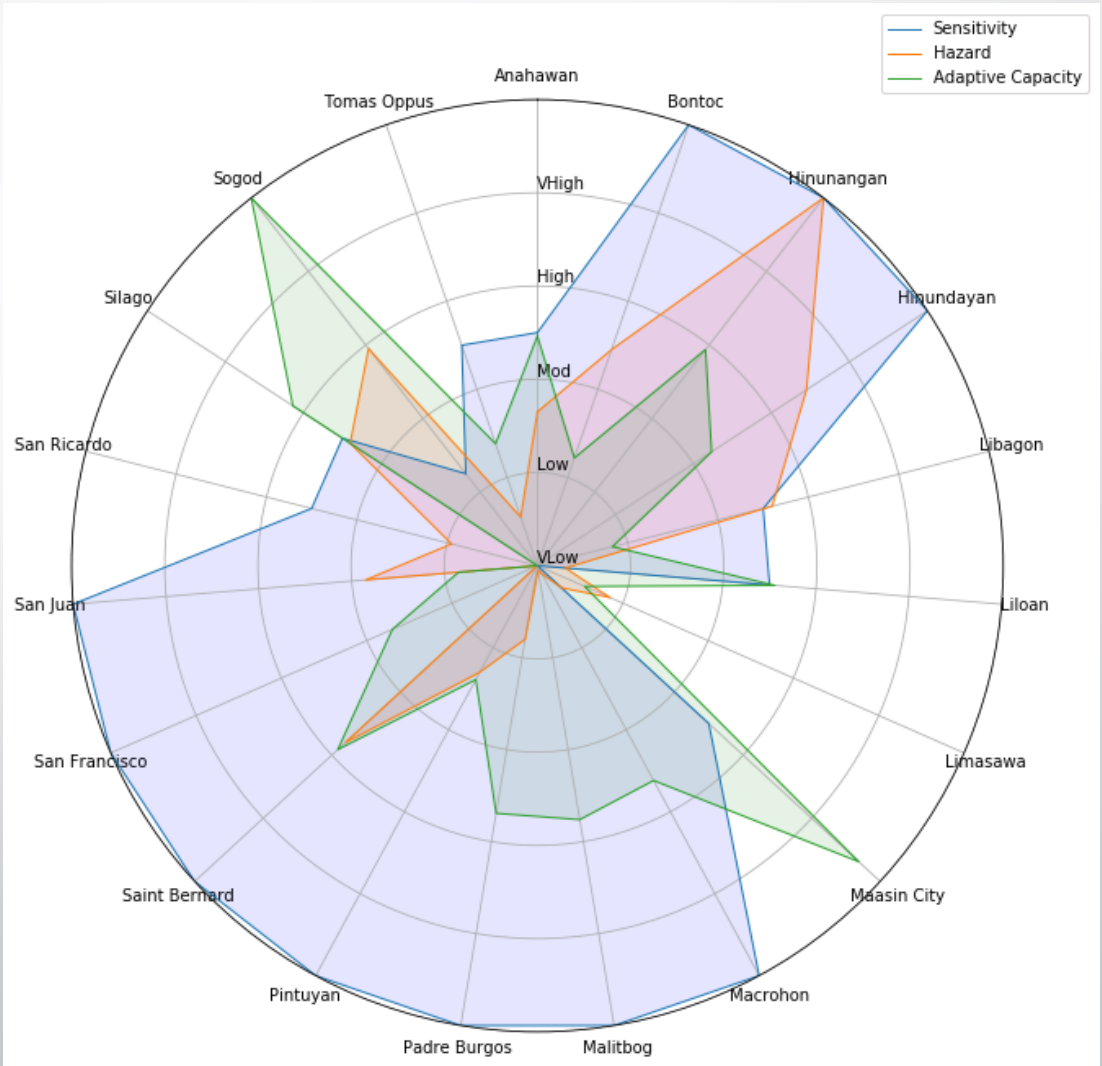


PAKBET VEGETABLES CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050



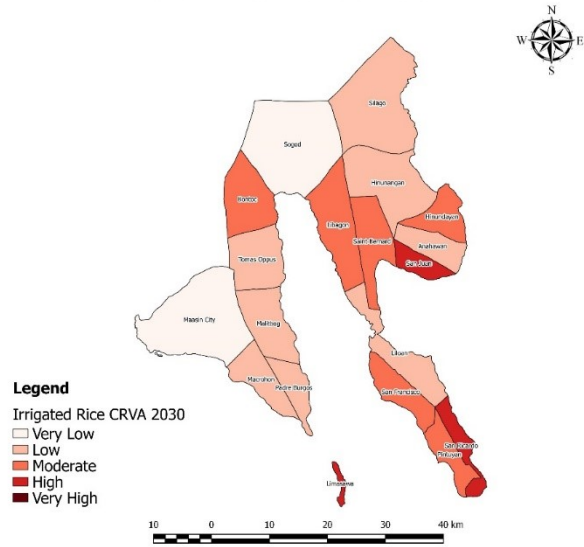
CRVA 2030

CRVA 2050



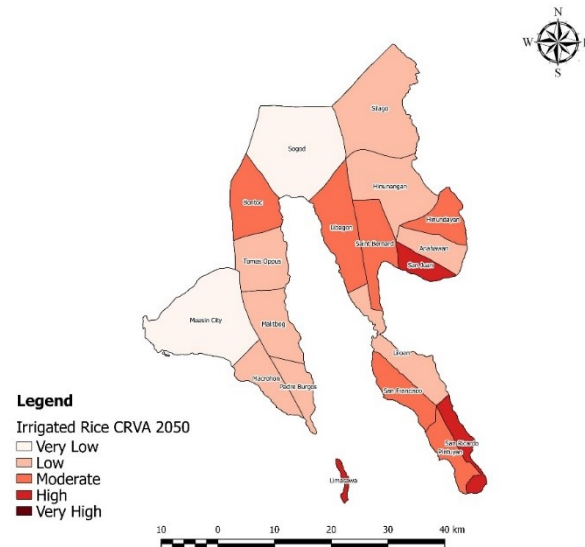
CRVA FOR IRRIGATED RICE (SOUTHERN LEYTE PROVINCE)

IRRIGATED RICE CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

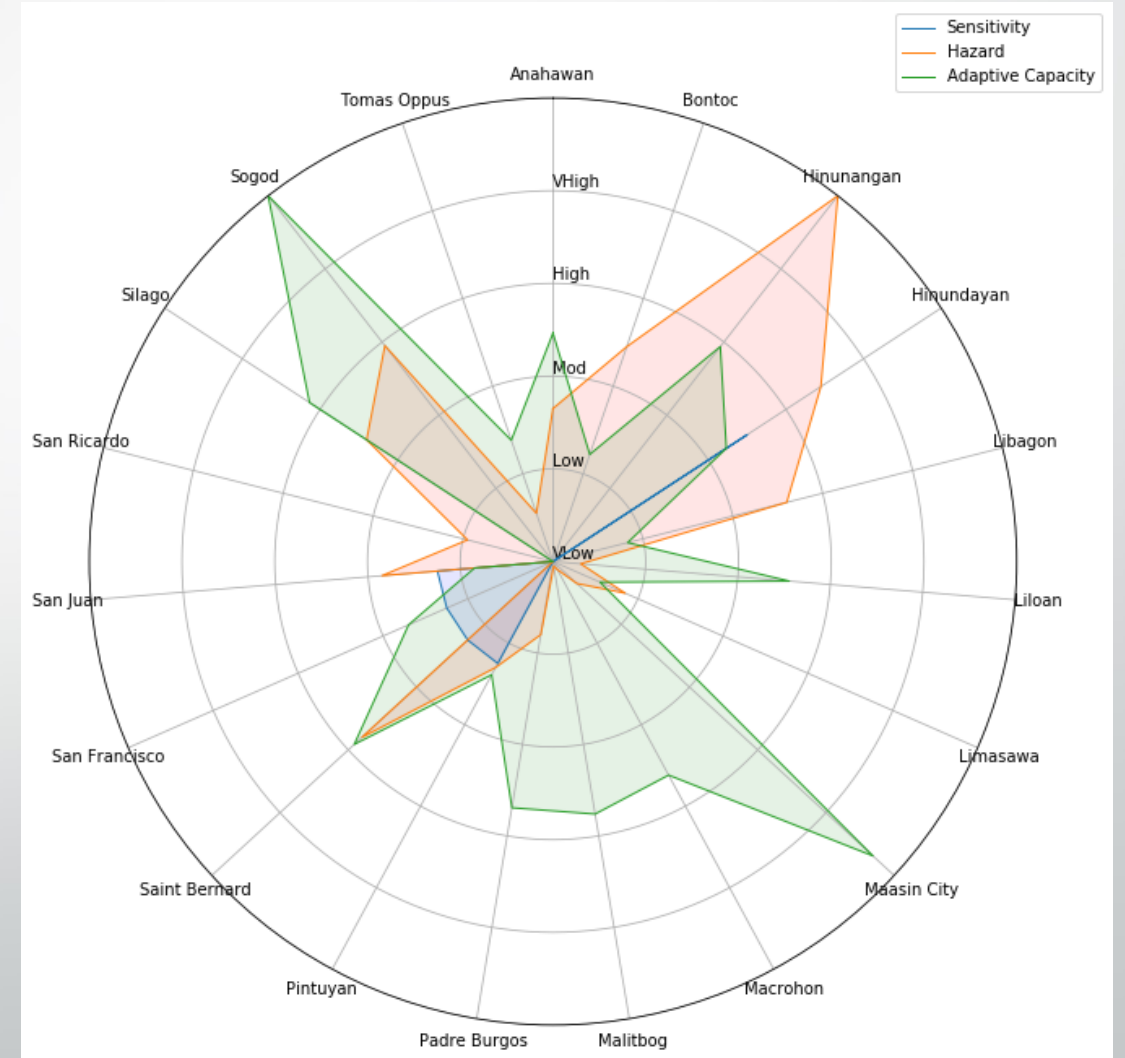


CRVA 2030

IRRIGATED RICE CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050

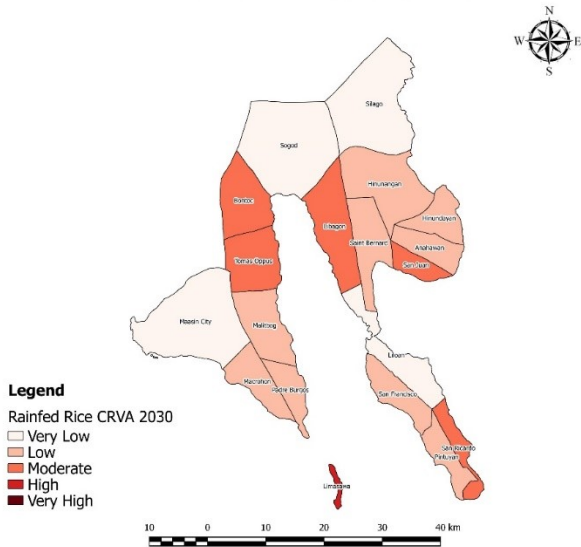


CRVA 2050

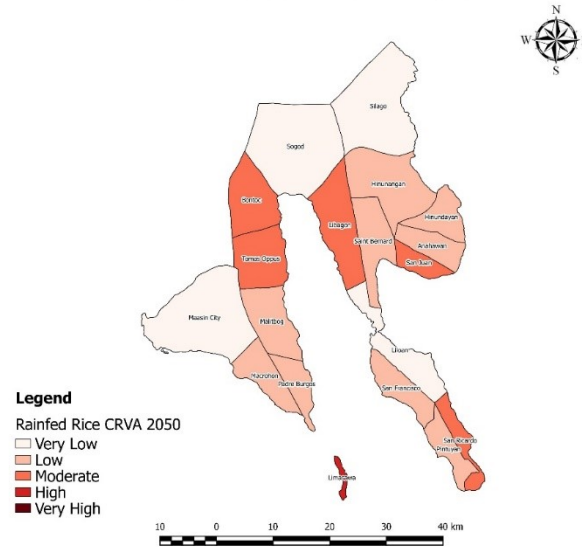


CRVA FOR RAINFED RICE (SOUTHERN LEYTE PROVINCE)

RAINFED RICE CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

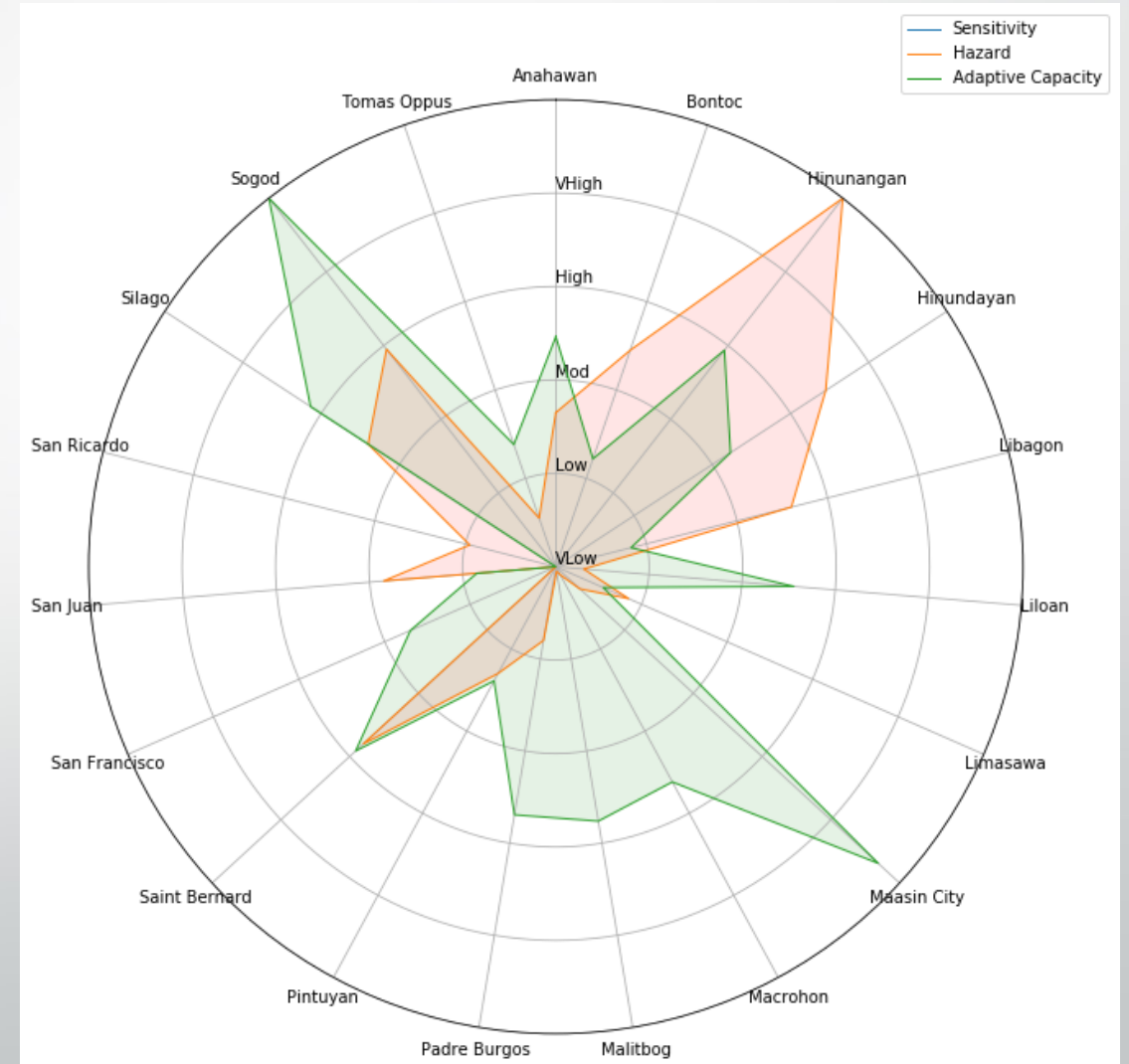


RAINFED RICE CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050



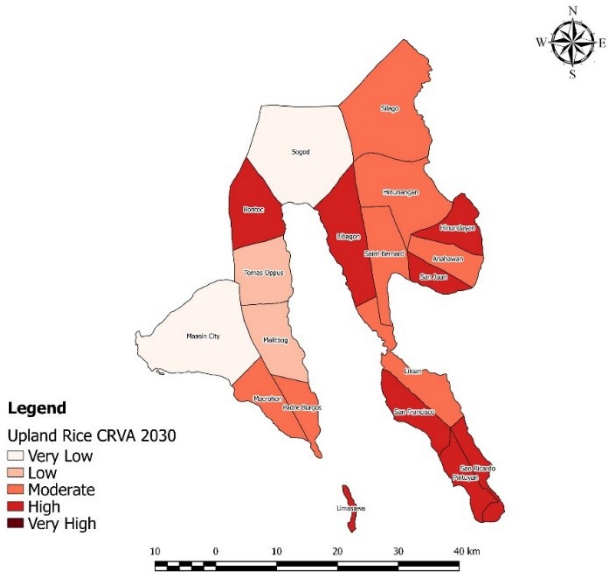
CRVA 2030

CRVA 2050



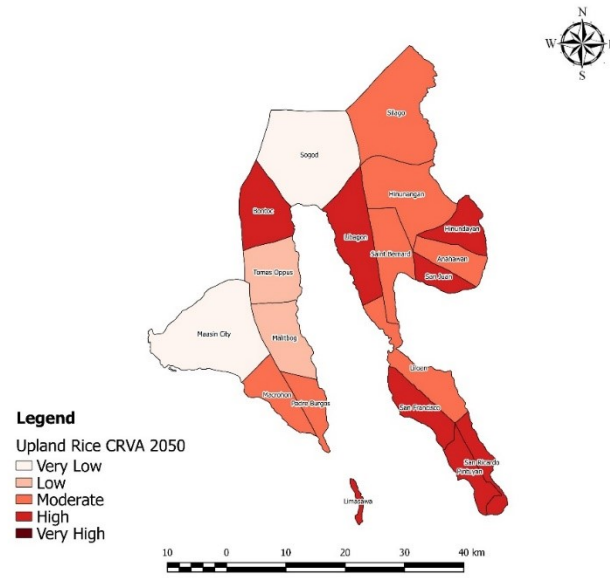
CRVA FOR UPLAND RICE (SOUTHERN LEYTE PROVINCE)

UPLAND RICE CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2030

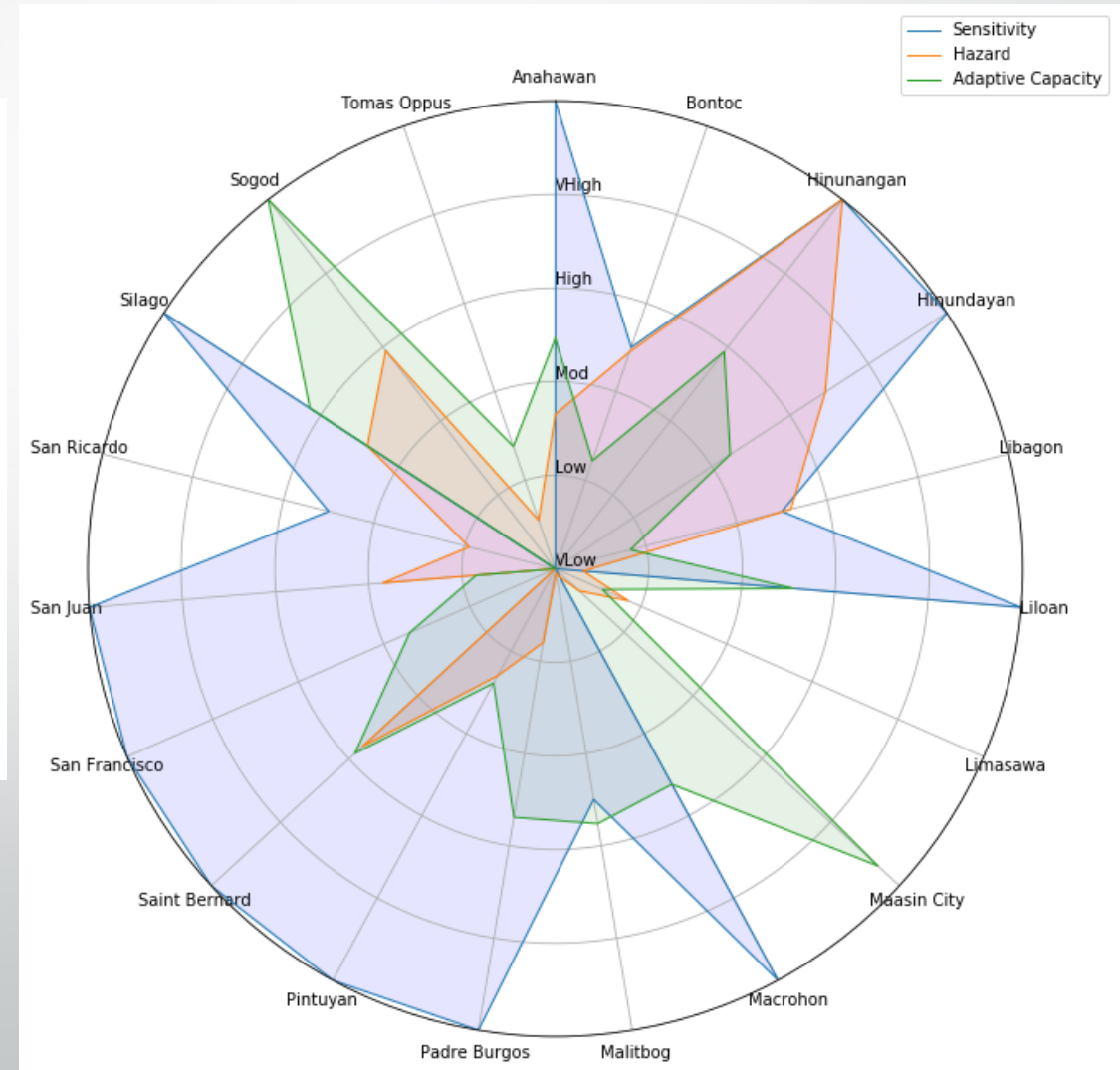


CRVA 2030

UPLAND RICE CRVA IN SOUTHERN LEYTE PROVINCE FOR THE YEAR 2050

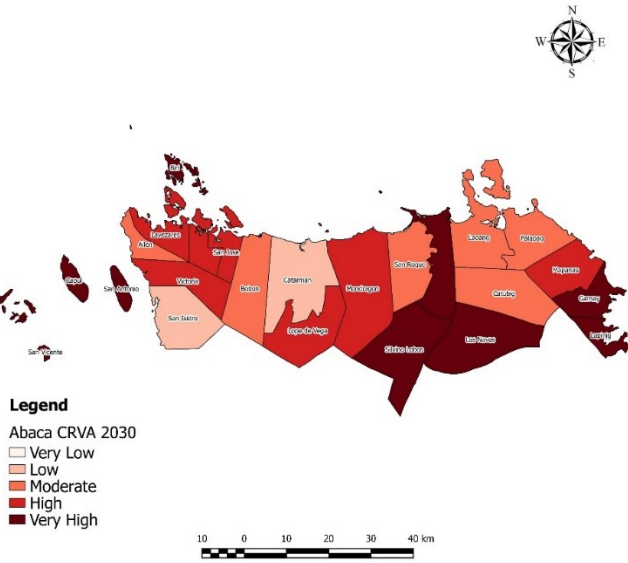


CRVA 2050

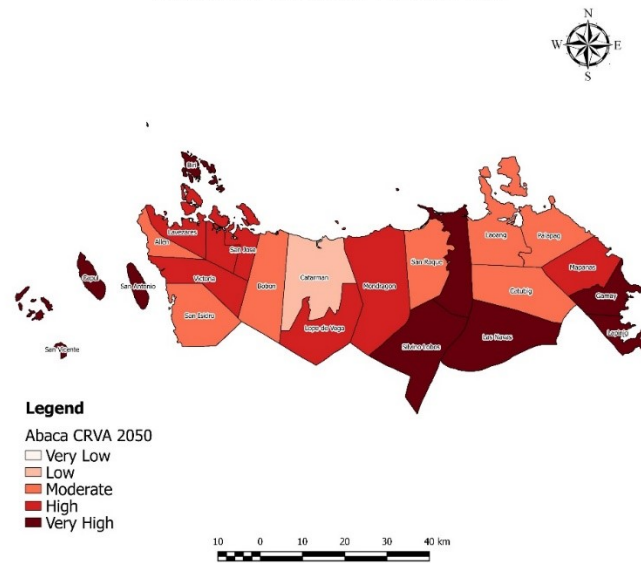


CRVA FOR ABACA (NORTHERN SAMAR PROVINCE)

ABACA CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

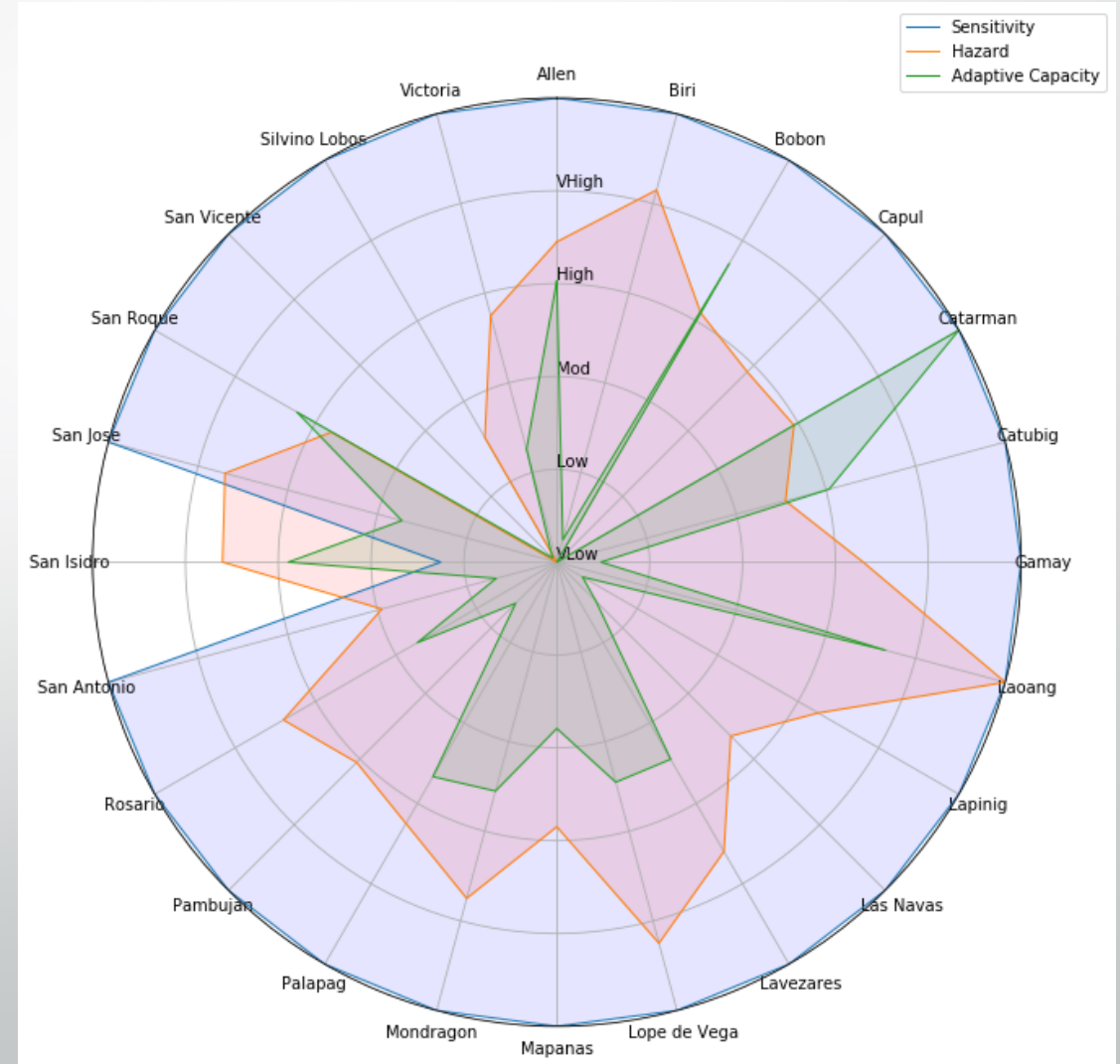


ABACA CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050



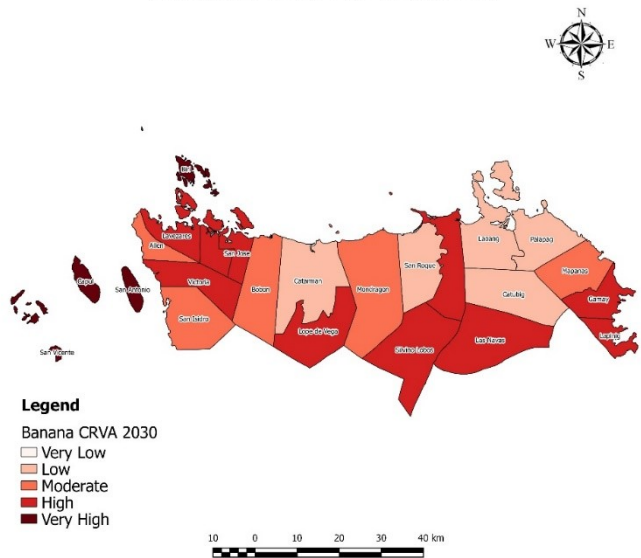
CRVA 2030

CRVA 2050

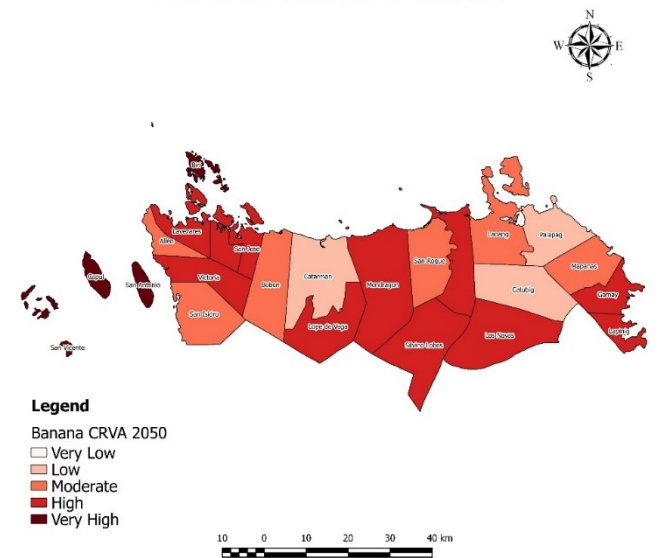


CRVA FOR BANANA (NORTHERN SAMAR PROVINCE)

BANANA CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

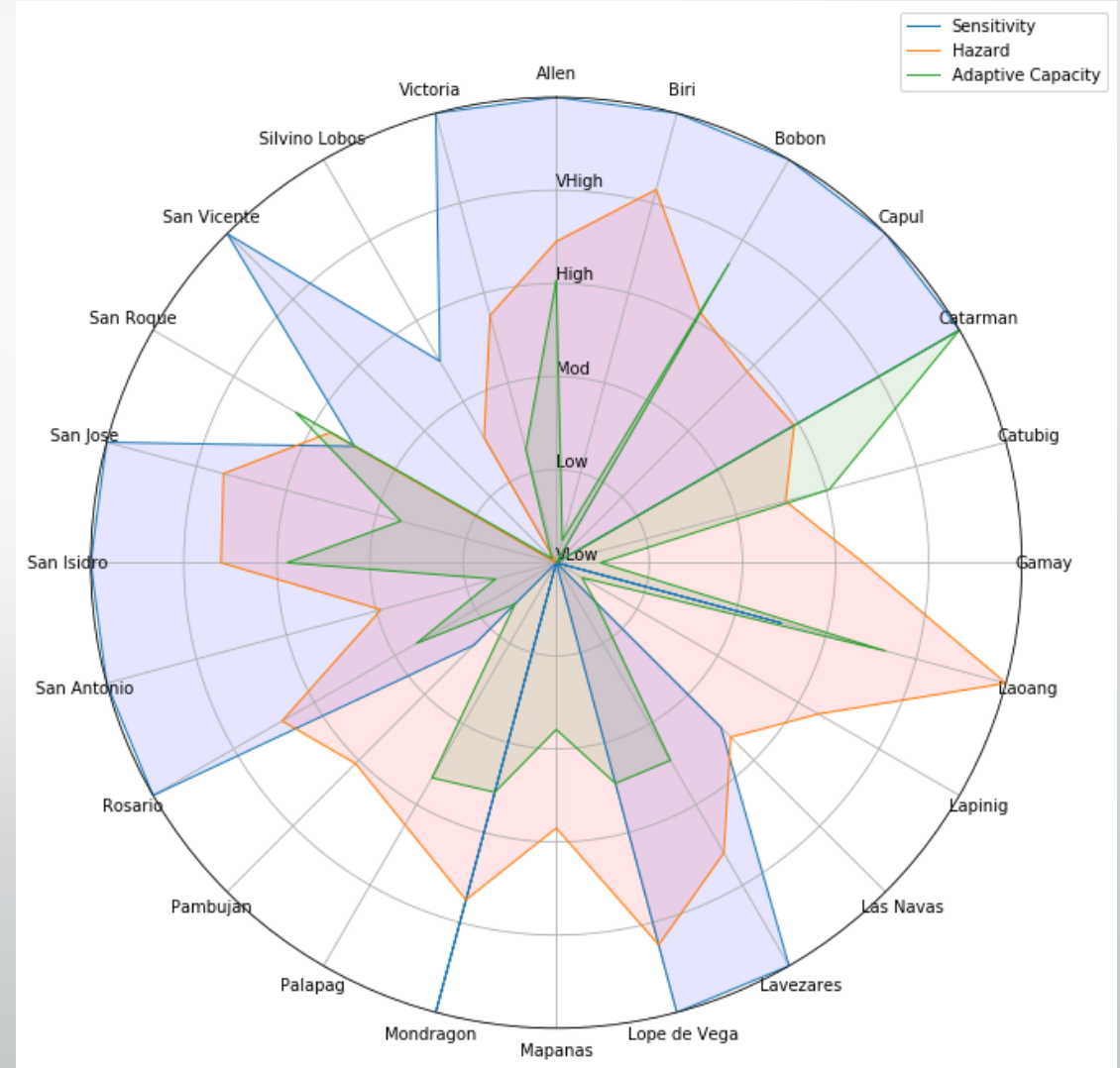


BANANA CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050



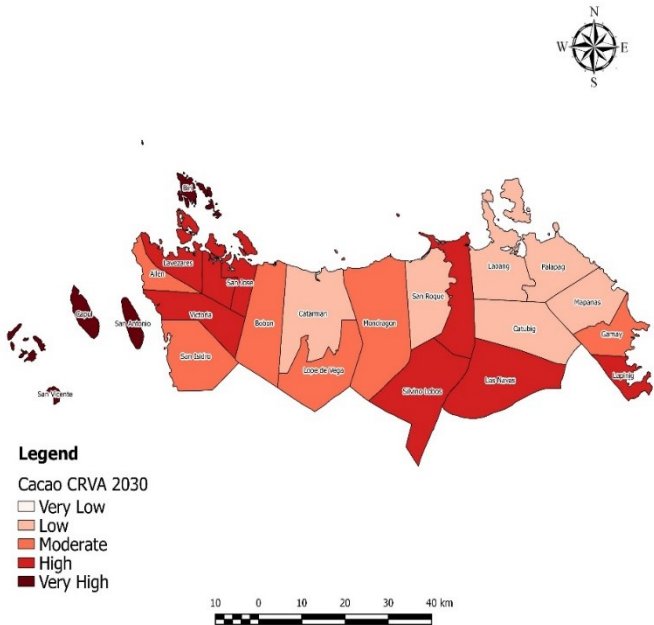
CRVA 2030

CRVA 2050



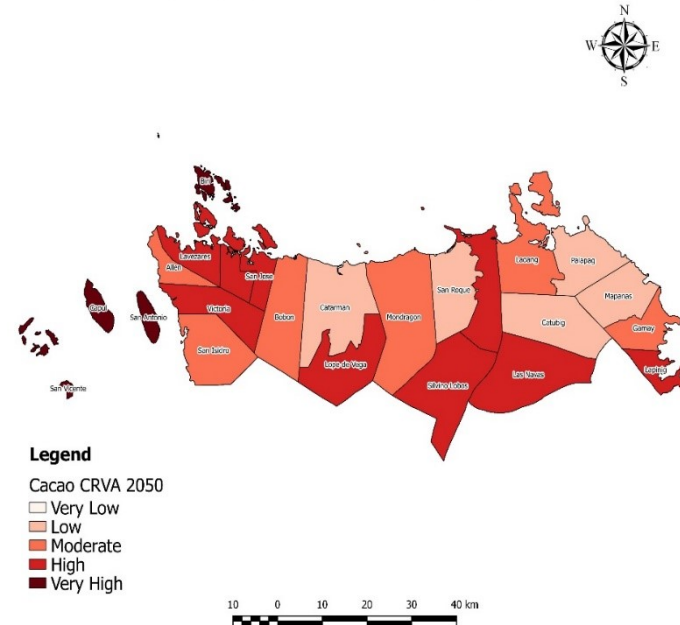
CRVA FOR CACAO (NORTHERN SAMAR PROVINCE)

CACAO CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

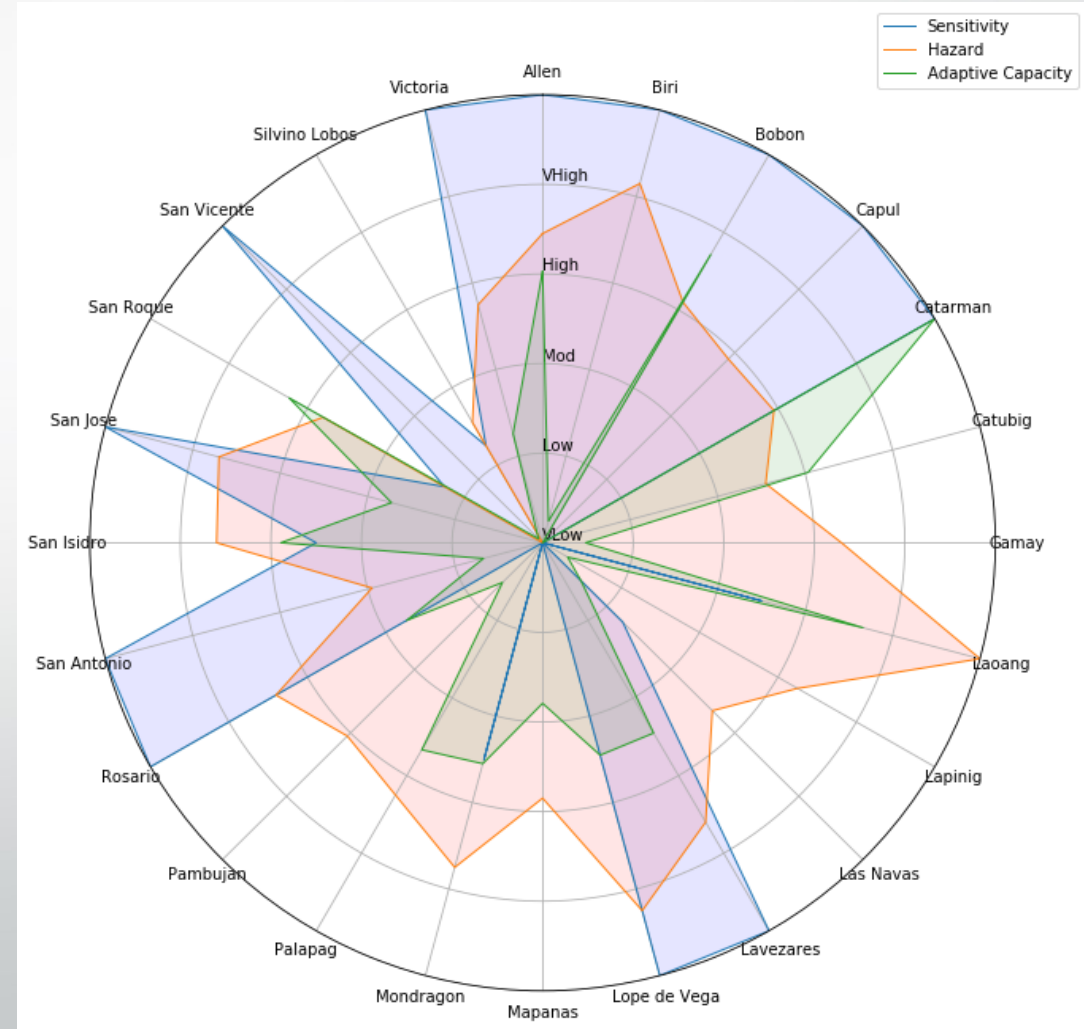


CRVA 2030

CACAO CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050

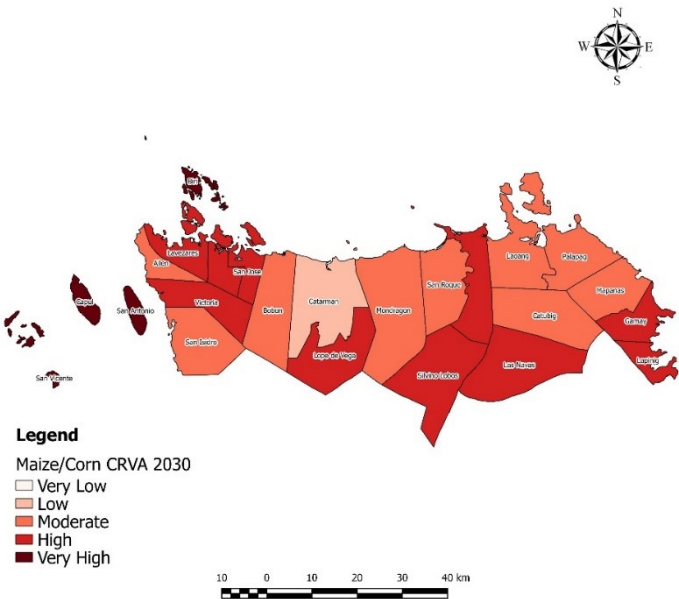


CRVA 2050

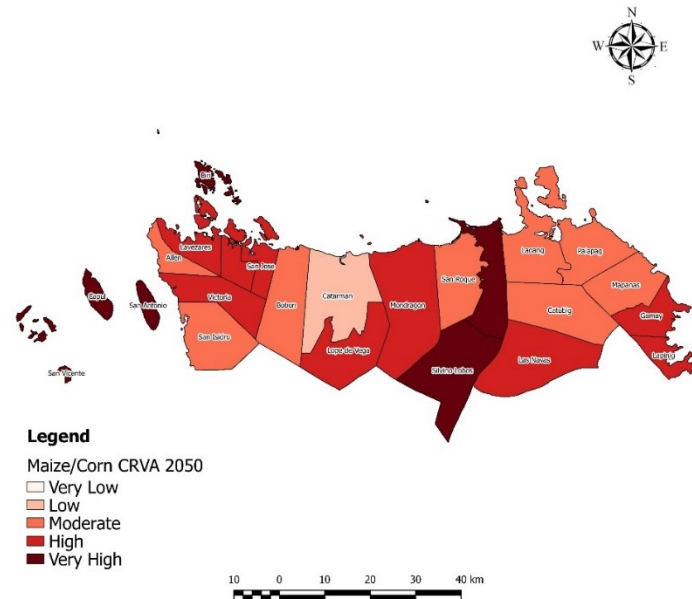


CRVA FOR CORN (NORTHERN SAMAR PROVINCE)

MAIZE/CORN CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

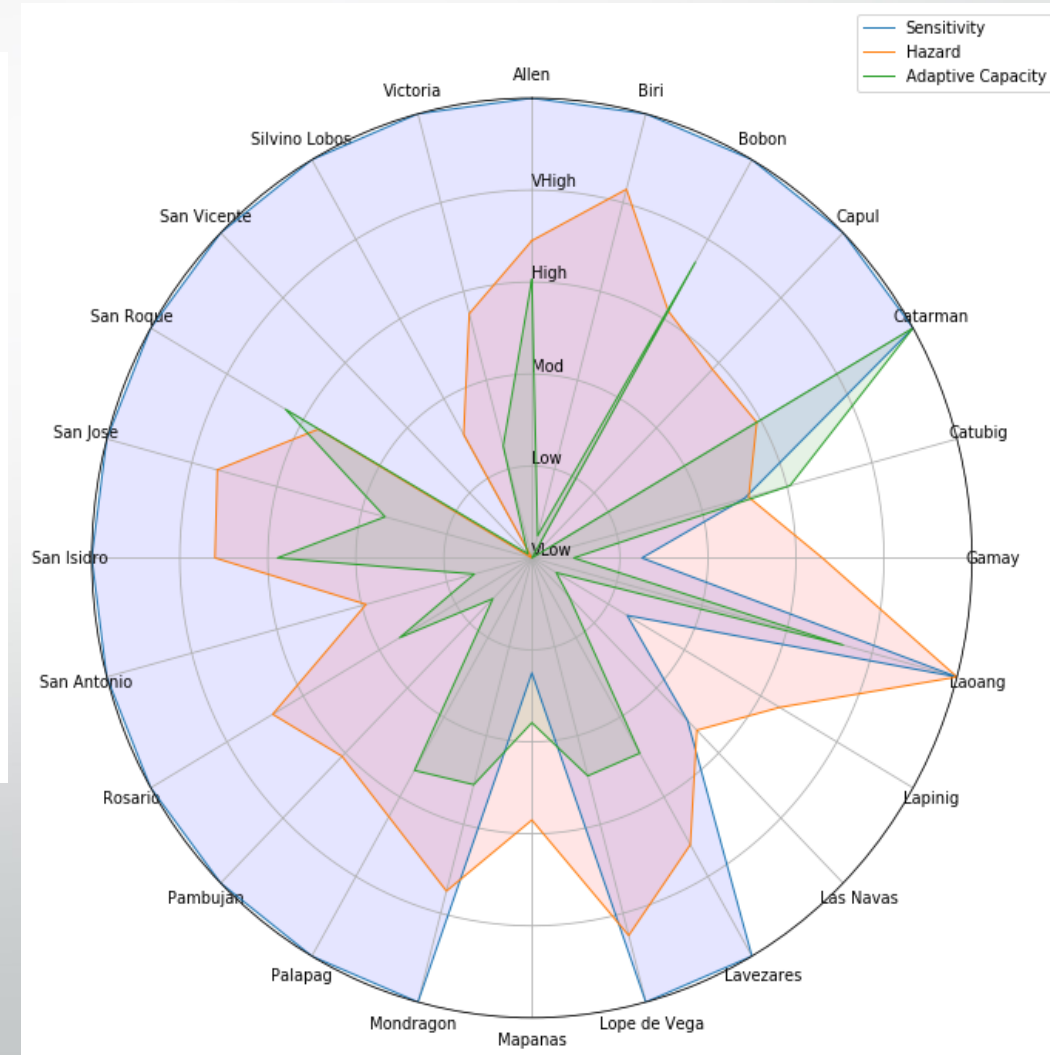


MAIZE/CORN CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050



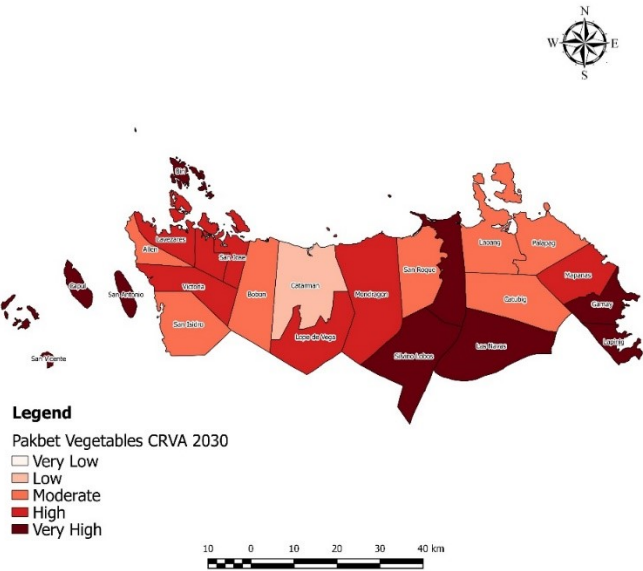
CRVA 2030

CRVA 2050



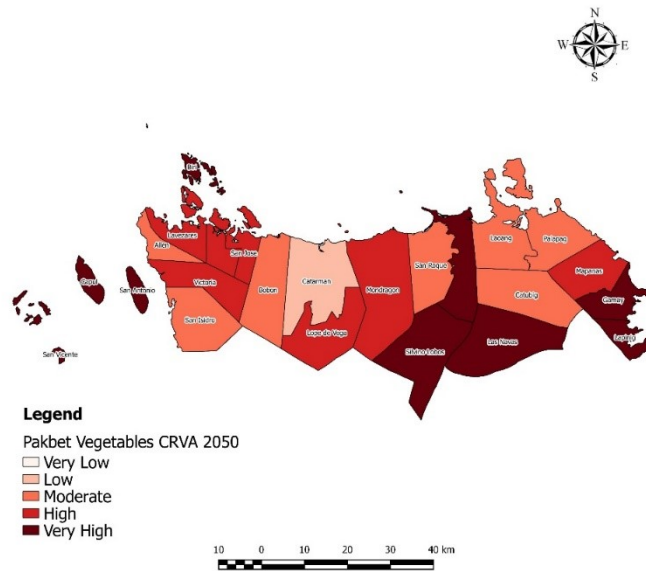
CRVA FOR PAKBET (NORTHERN SAMAR PROVINCE)

PAKBET VEGETABLES CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

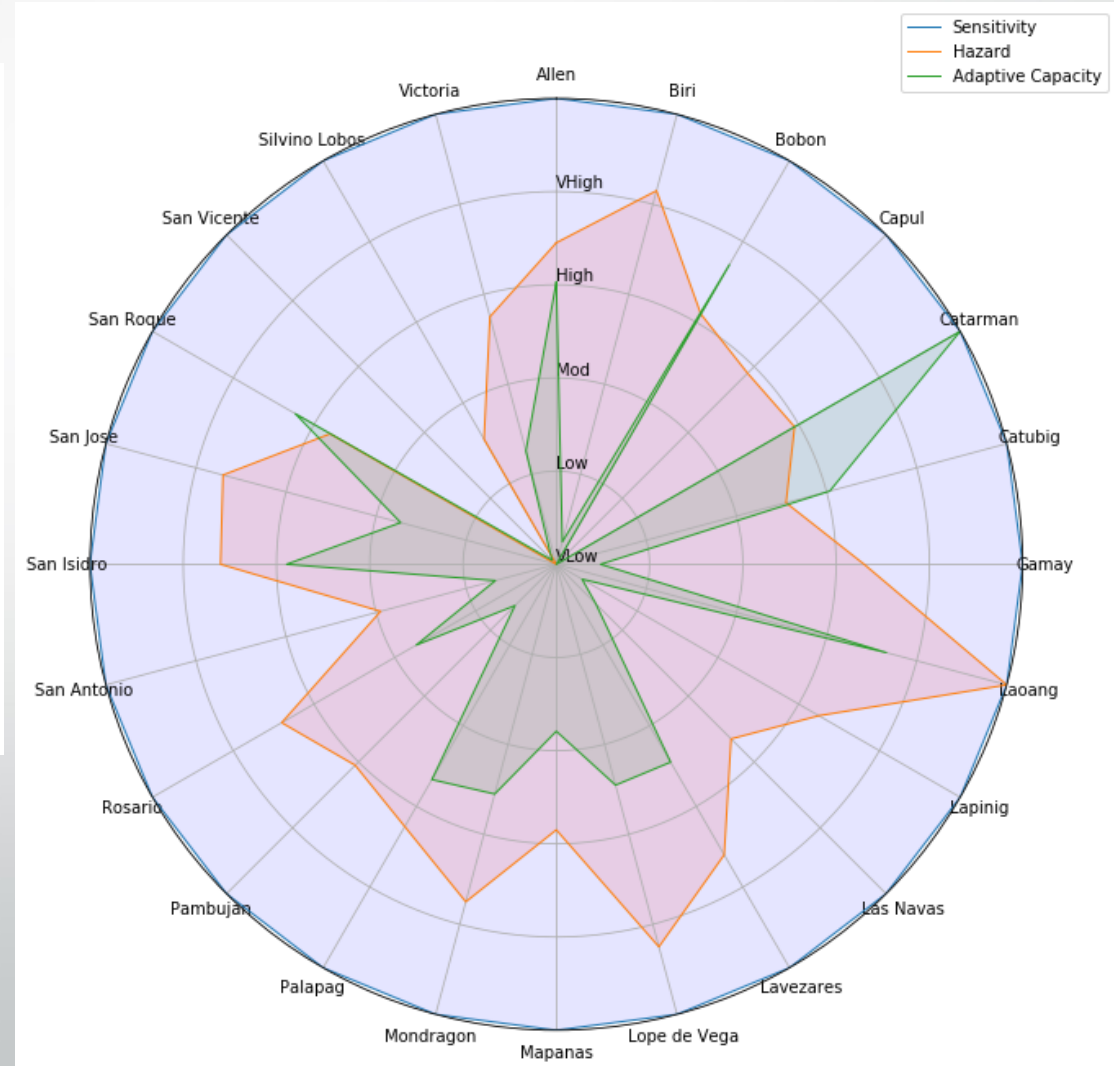


CRVA 2030

PAKBET VEGETABLES CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050

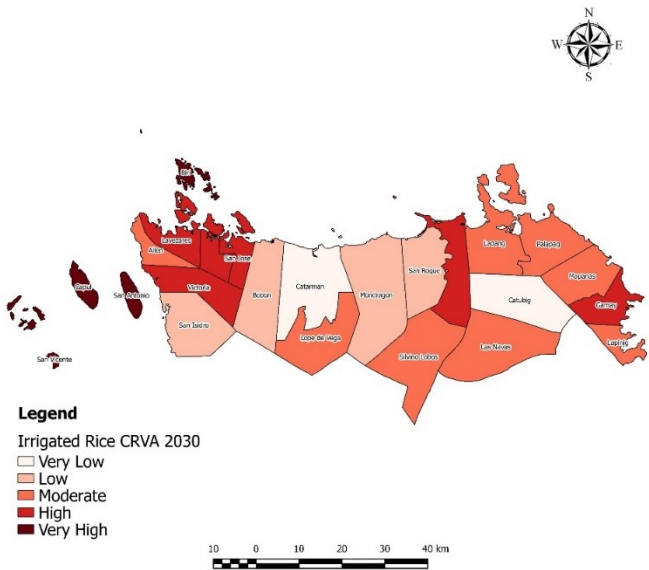


CRVA 2050



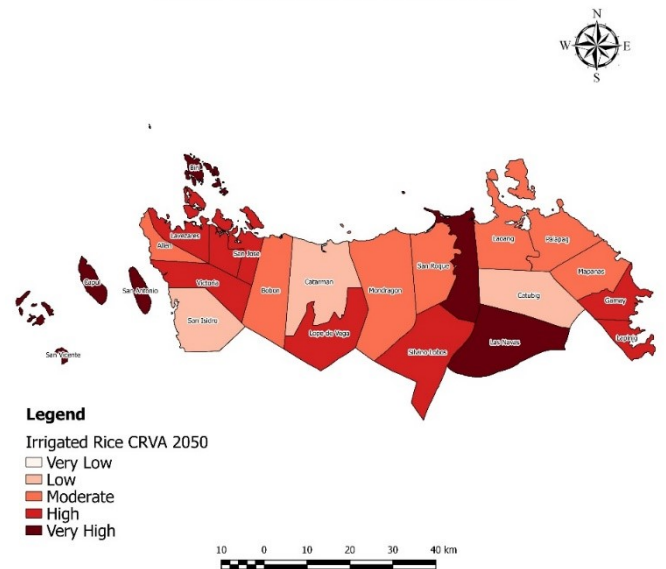
CRVA FOR IRRIGATED RICE (NORTHERN SAMAR PROVINCE)

IRRIGATED RICE CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

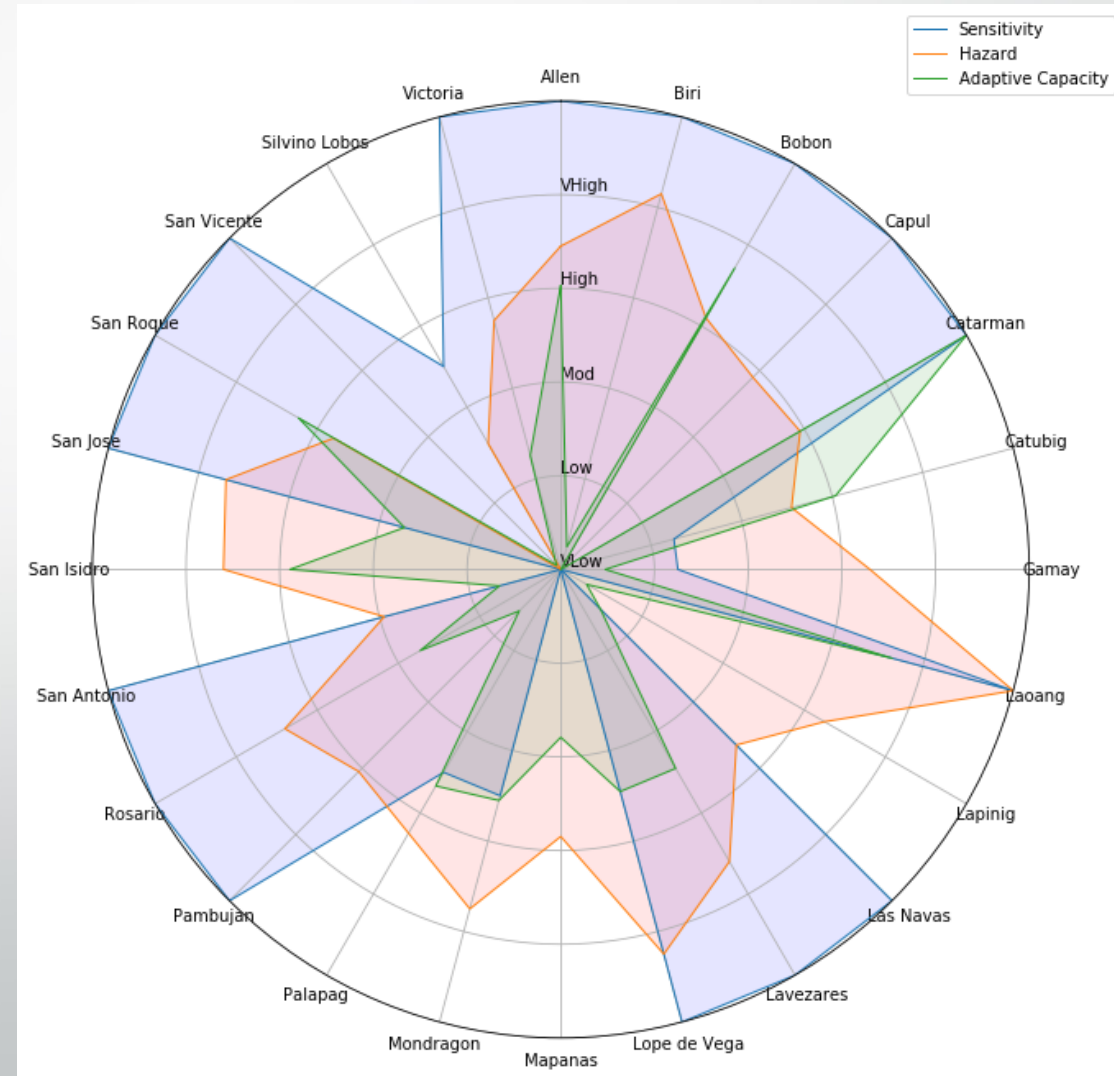


CRVA 2030

IRRIGATED RICE CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050

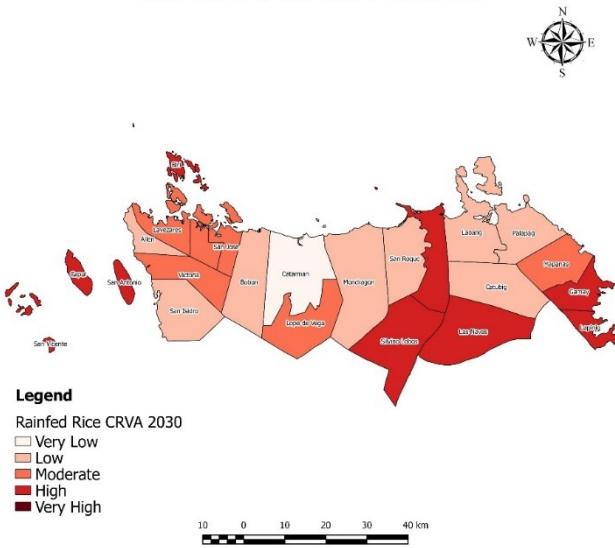


CRVA 2050



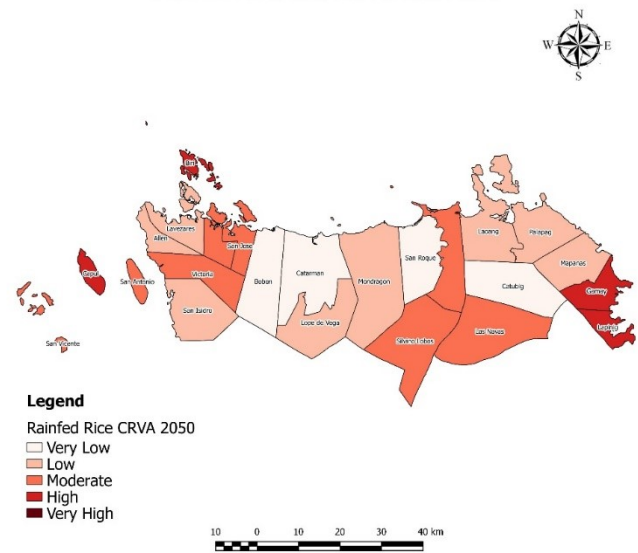
CRVA FOR RAINFED RICE (NORTHERN SAMAR PROVINCE)

RAINFED RICE CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

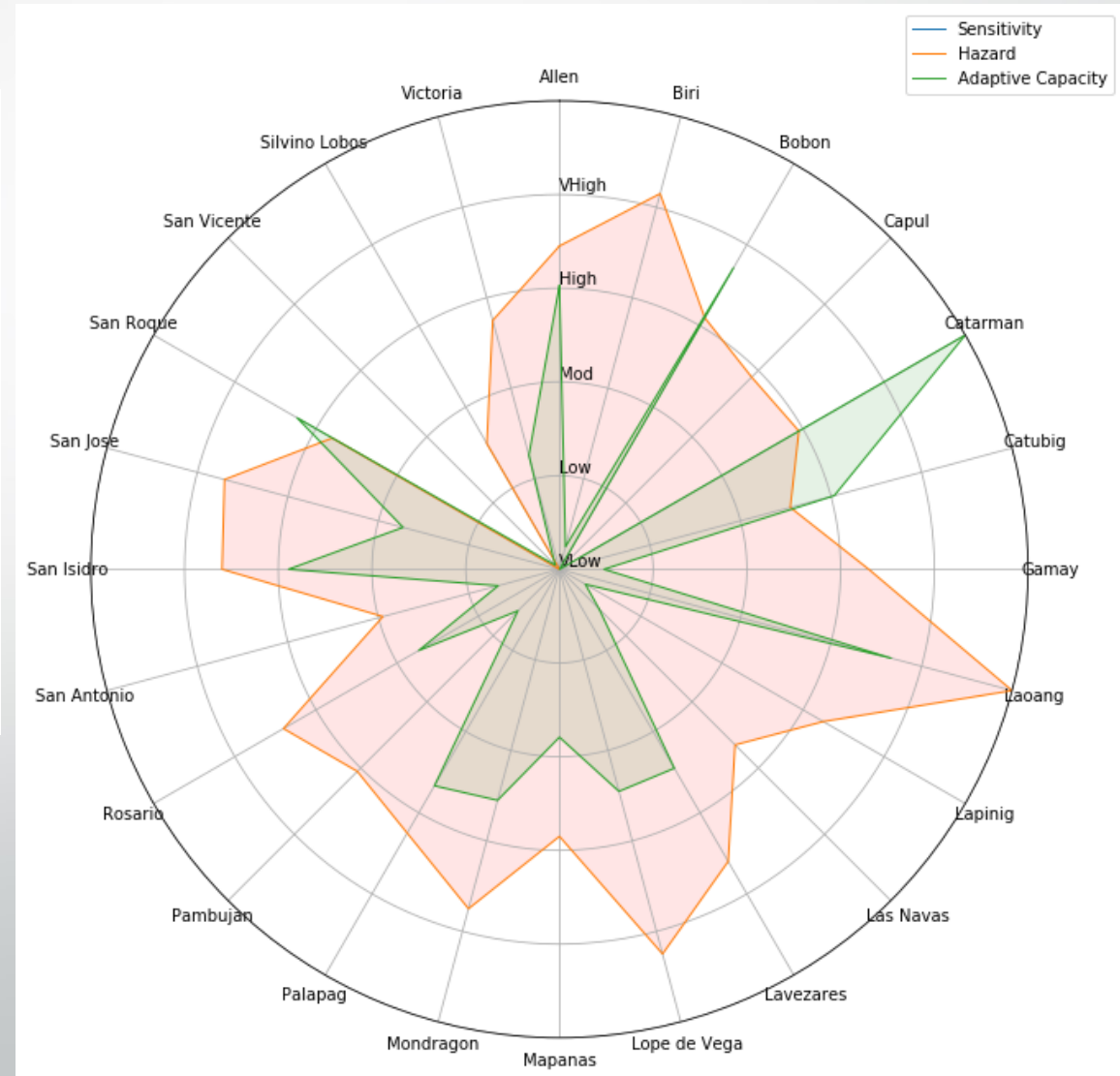


CRVA 2030

RAINFED RICE CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050

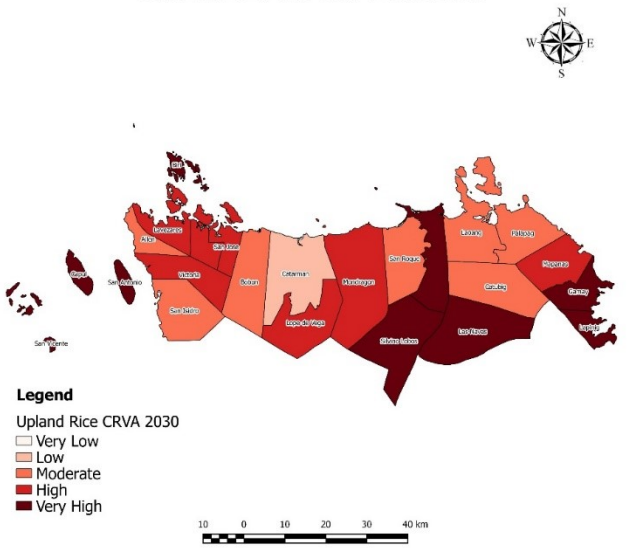


CRVA 2050

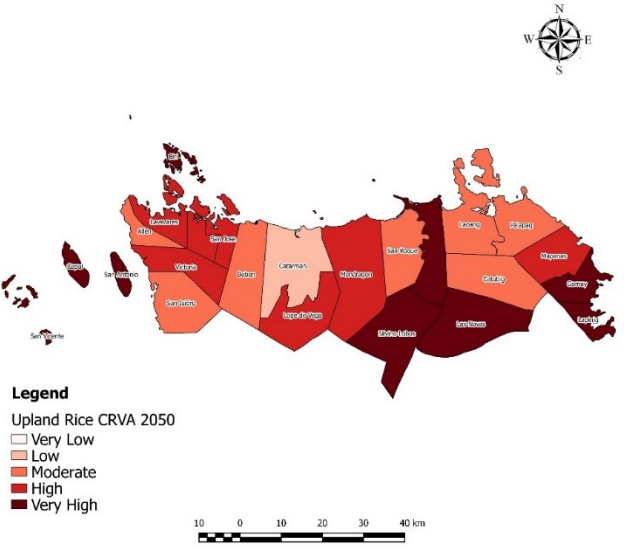


CRVA FOR UPLAND RICE (NORTHERN SAMAR PROVINCE)

UPLAND RICE CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2030

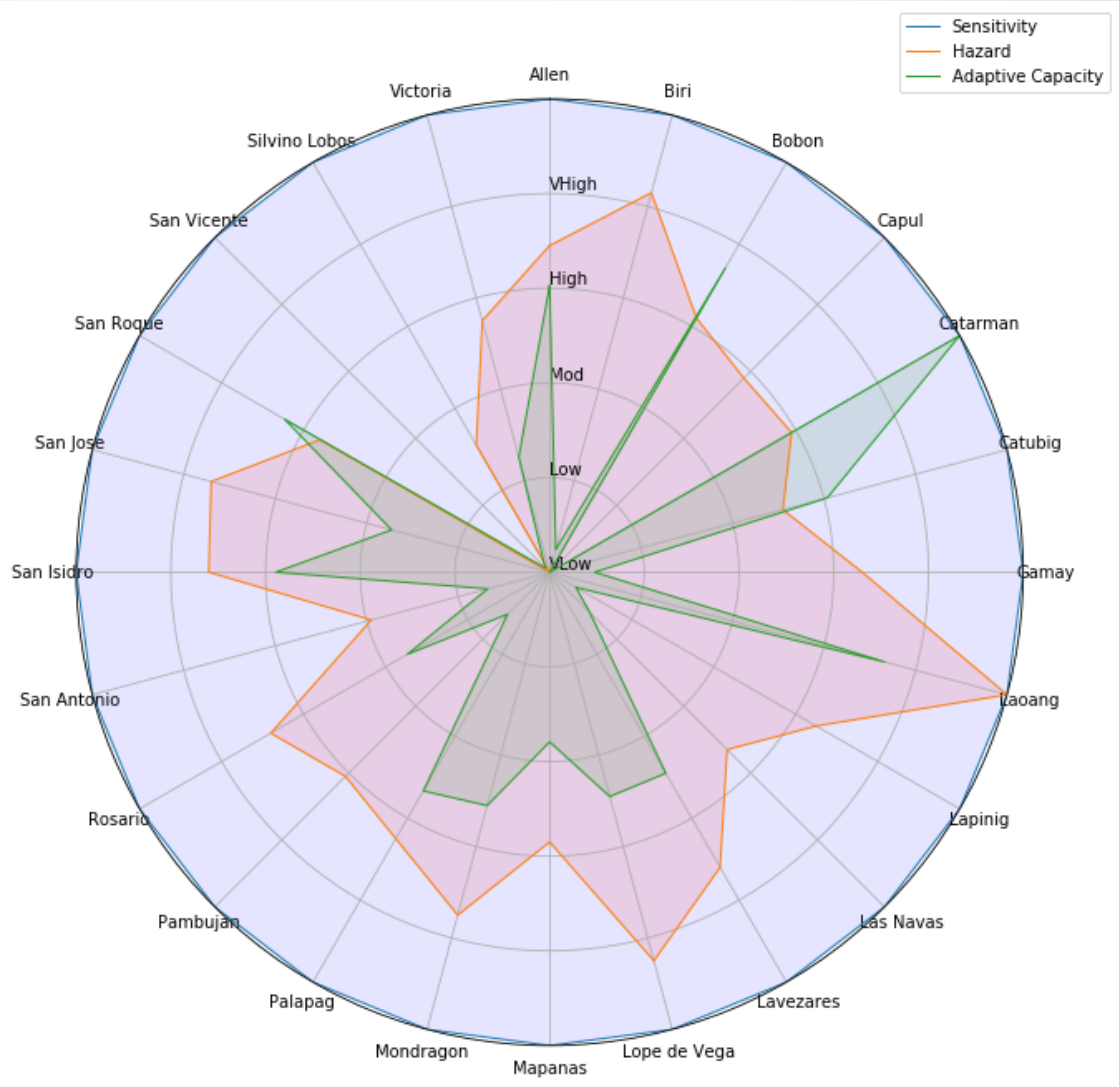


UPLAND RICE CRVA IN NORTHERN SAMAR PROVINCE FOR THE YEAR 2050



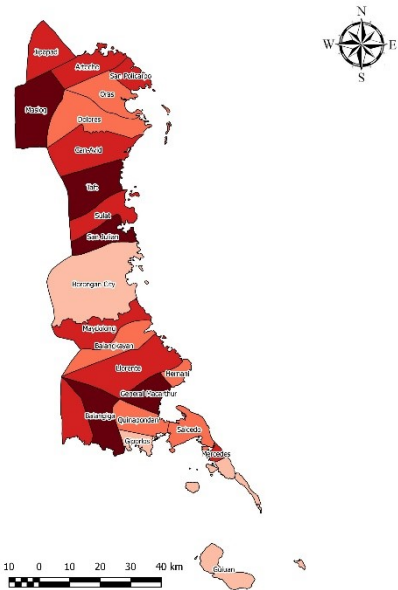
CRVA 2030

CRVA 2050



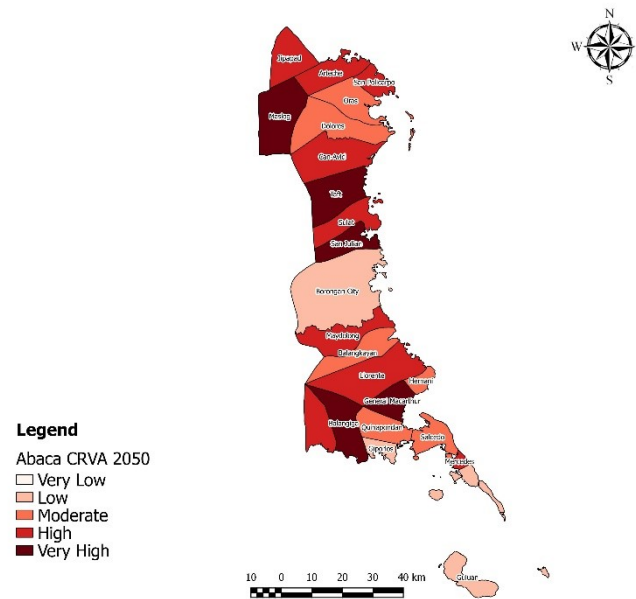
CRVA FOR ABACA (EASTERN SAMAR PROVINCE)

ABACA CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030

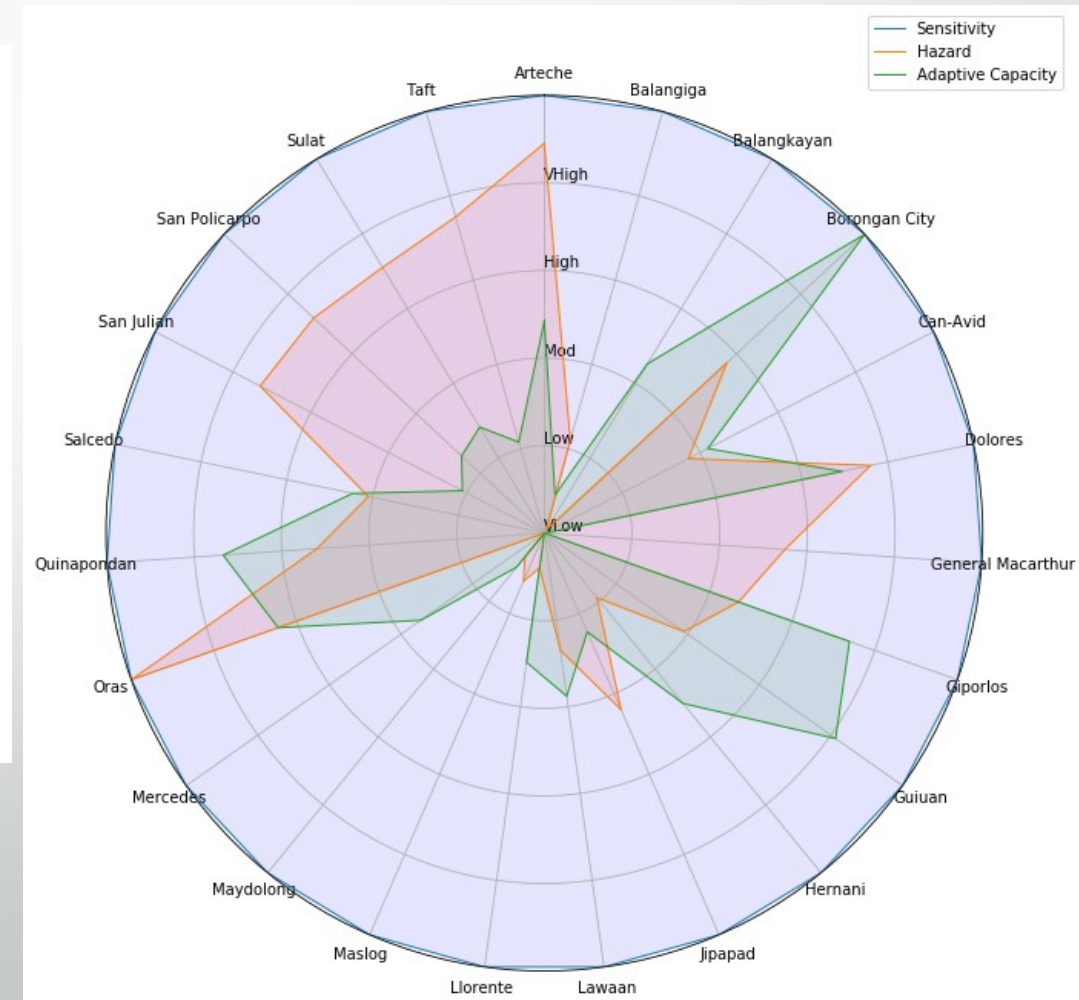


CRVA 2030

ABACA CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050

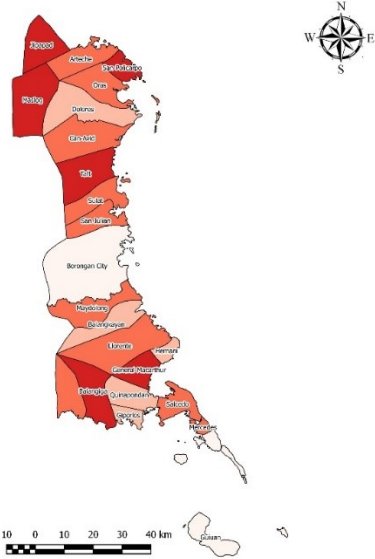


CRVA 2050



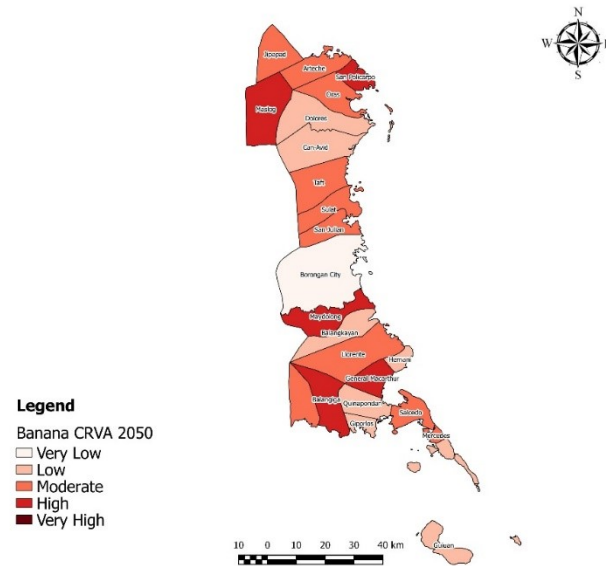
CRVA FOR BANANA (EASTERN SAMAR PROVINCE)

BANANA CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030

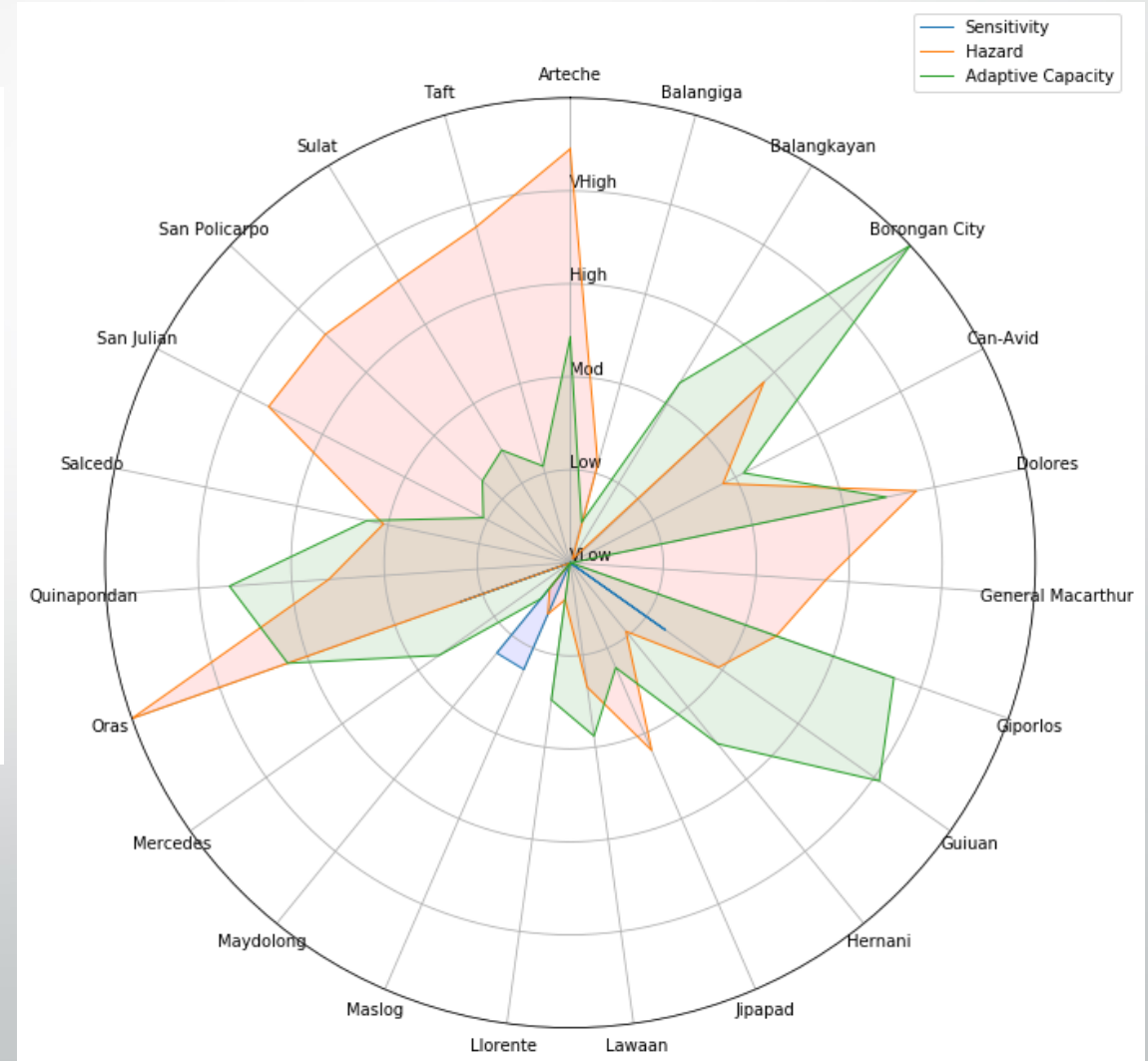


CRVA 2030

BANANA CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050

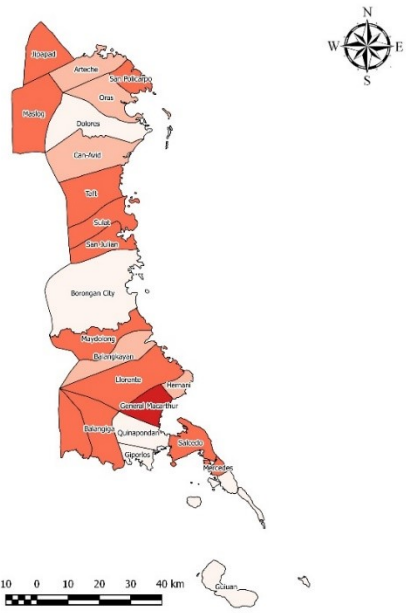


CRVA 2050



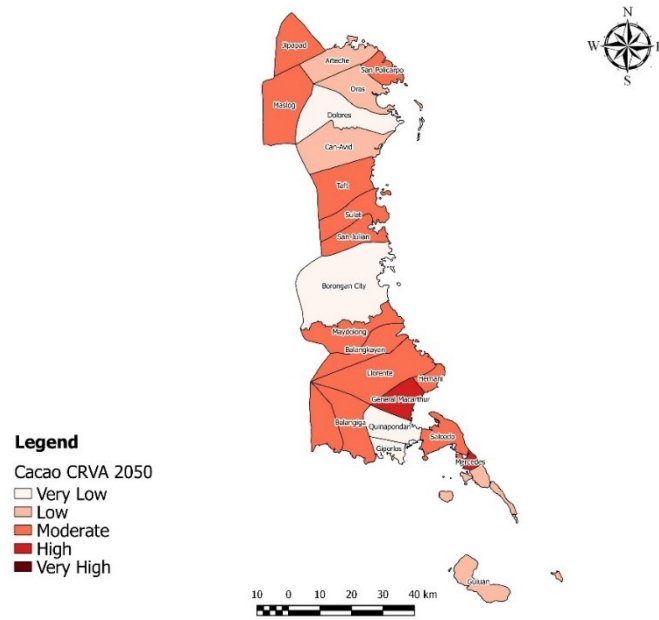
CRVA FOR CACAO (EASTERN SAMAR PROVINCE)

CACAO CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030

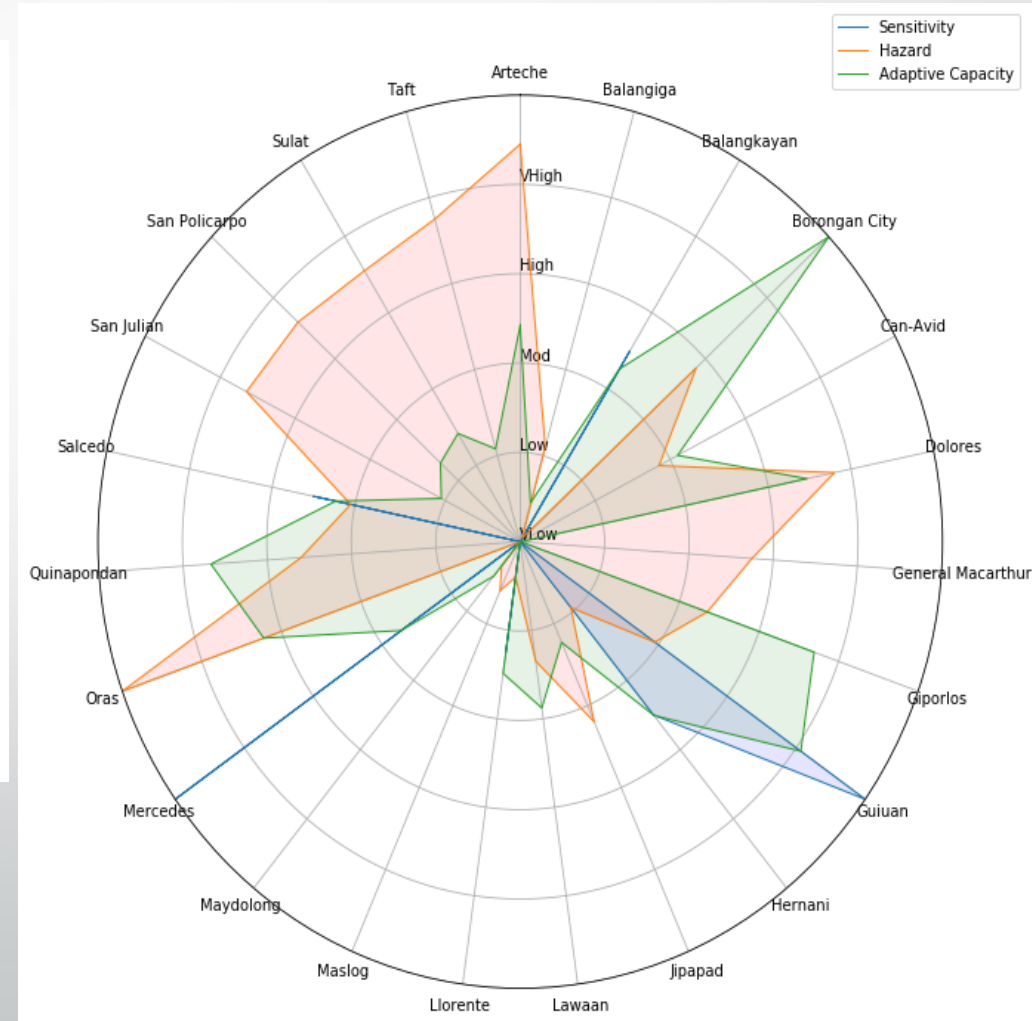


CRVA 2030

CACAO CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050

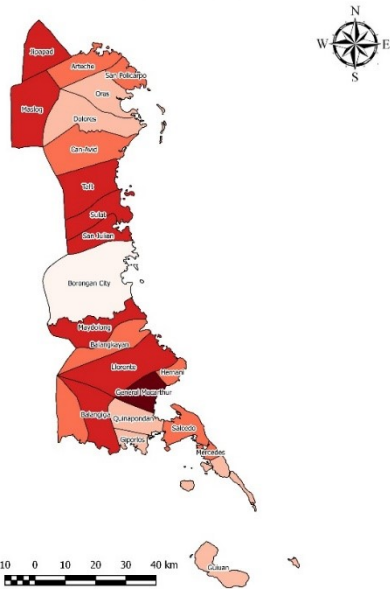


CRVA 2050



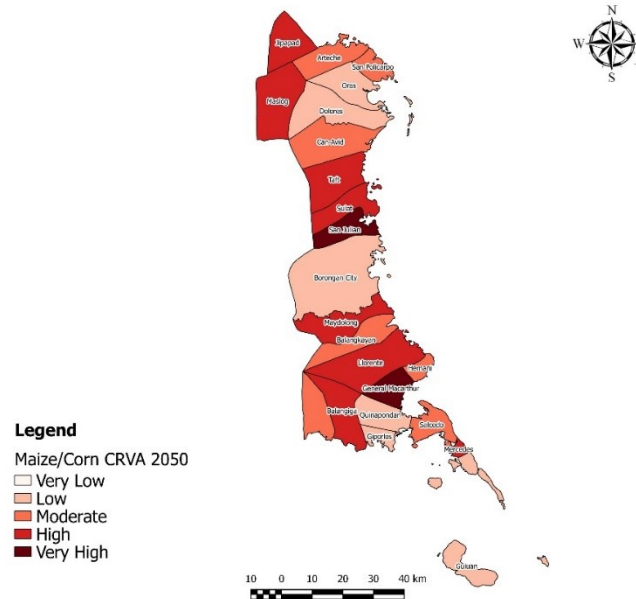
CRVA FOR CORN (EASTERN SAMAR PROVINCE)

MAIZE/CORN CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030

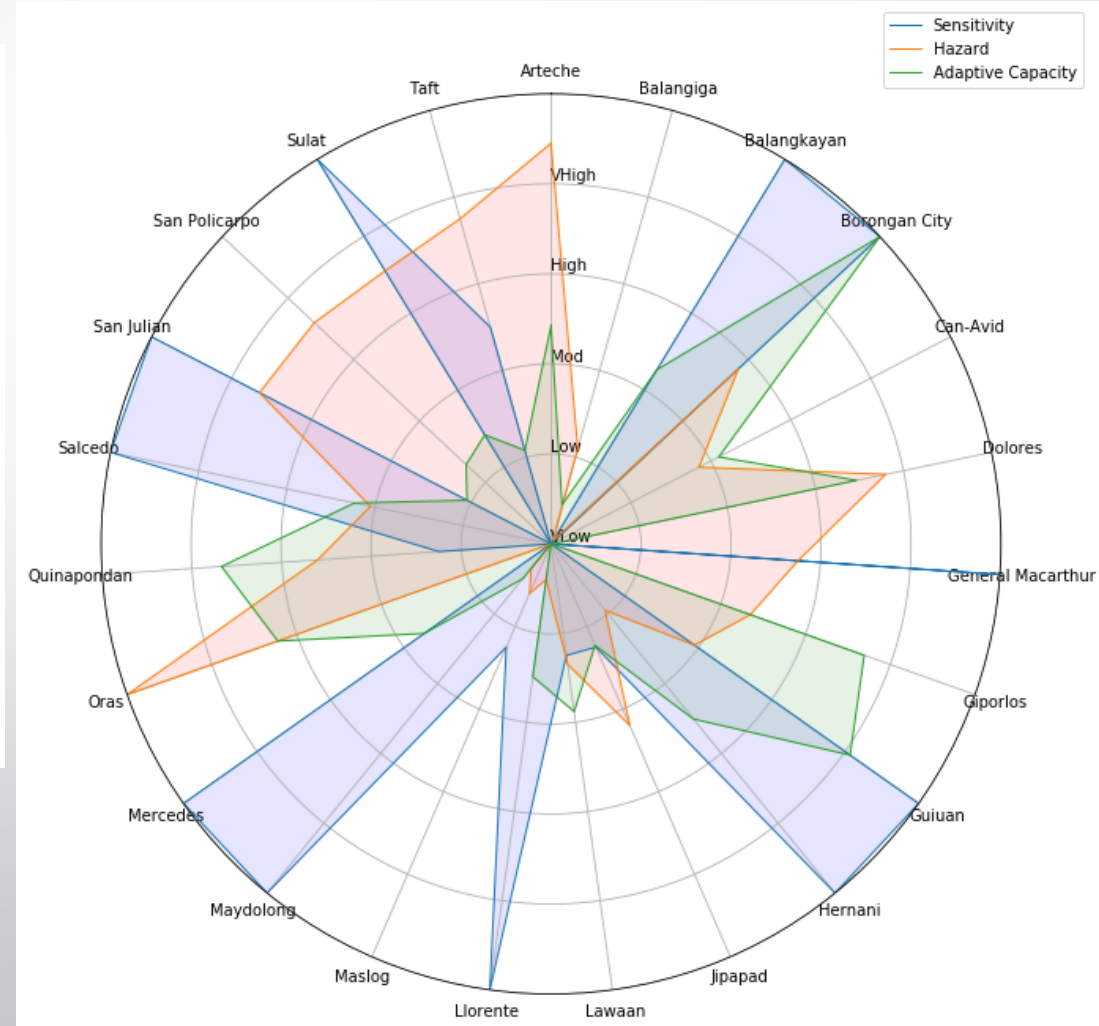


CRVA 2030

MAIZE/CORN CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050

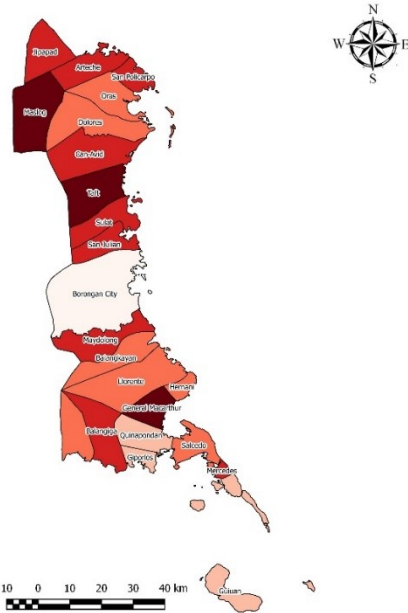


CRVA 2050

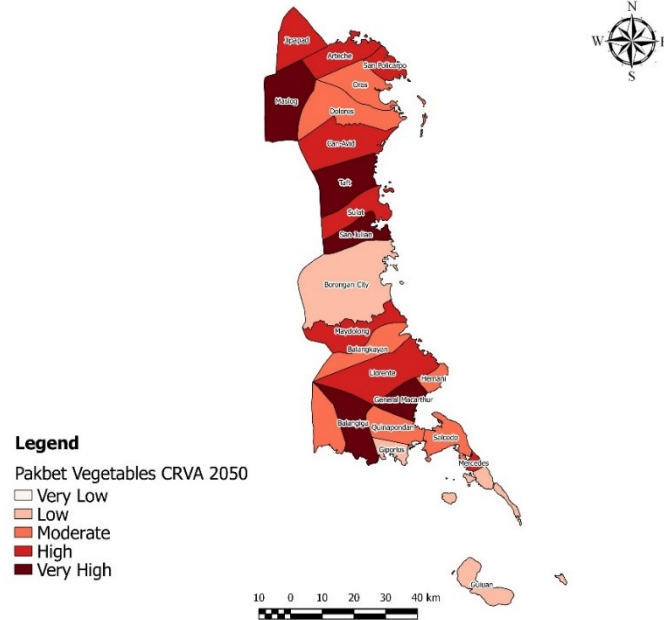


CRVA FOR PAKBET (EASTERN SAMAR PROVINCE)

PAKBET VEGETABLES CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030

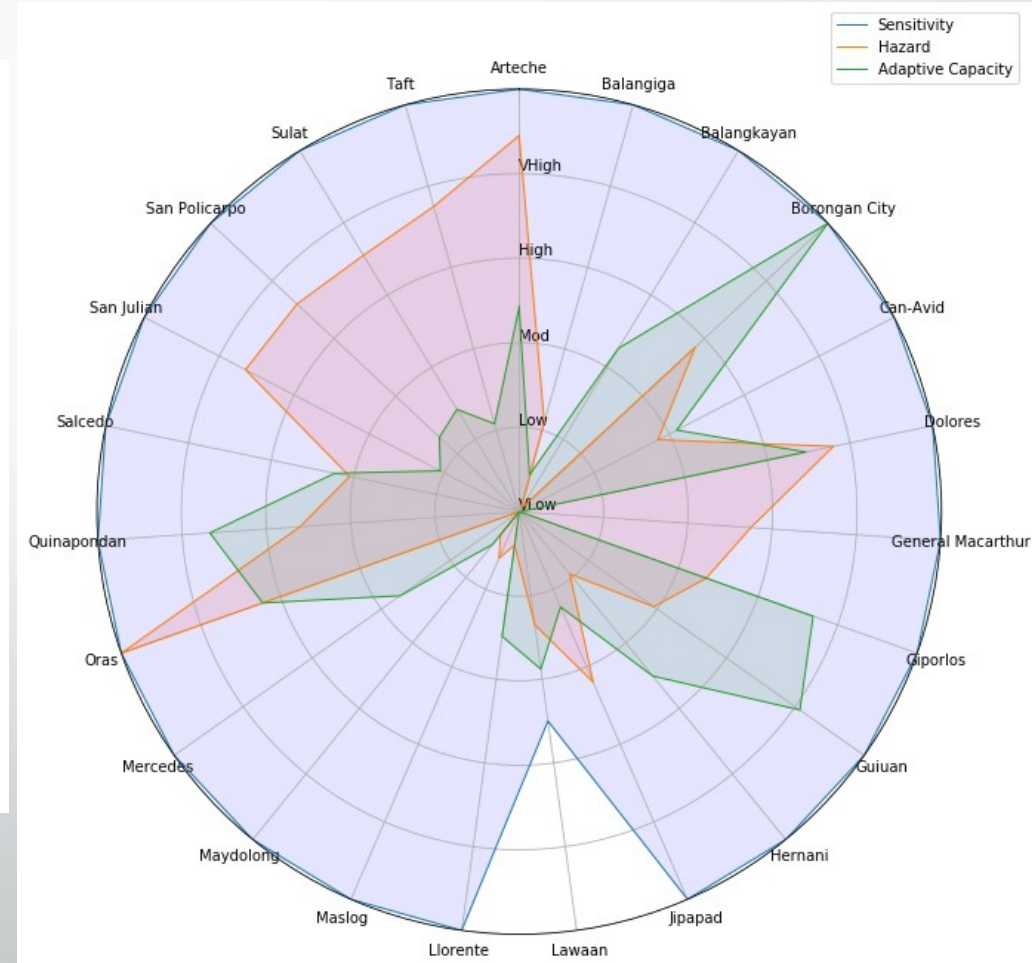


PAKBET VEGETABLES CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050



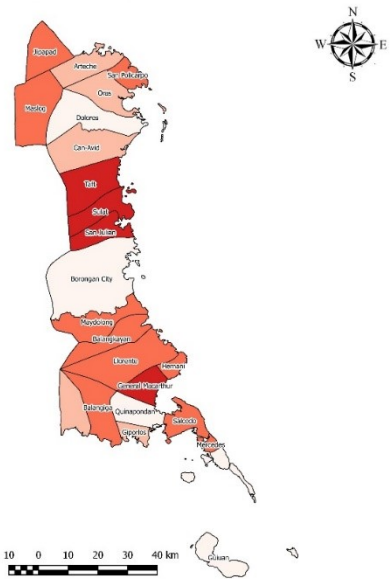
CRVA 2030

CRVA 2050



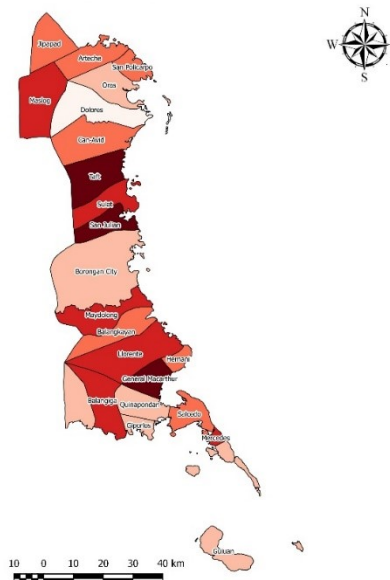
CRVA FOR IRRIGATED RICE (EASTERN SAMAR PROVINCE)

IRRIGATED RICE CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030

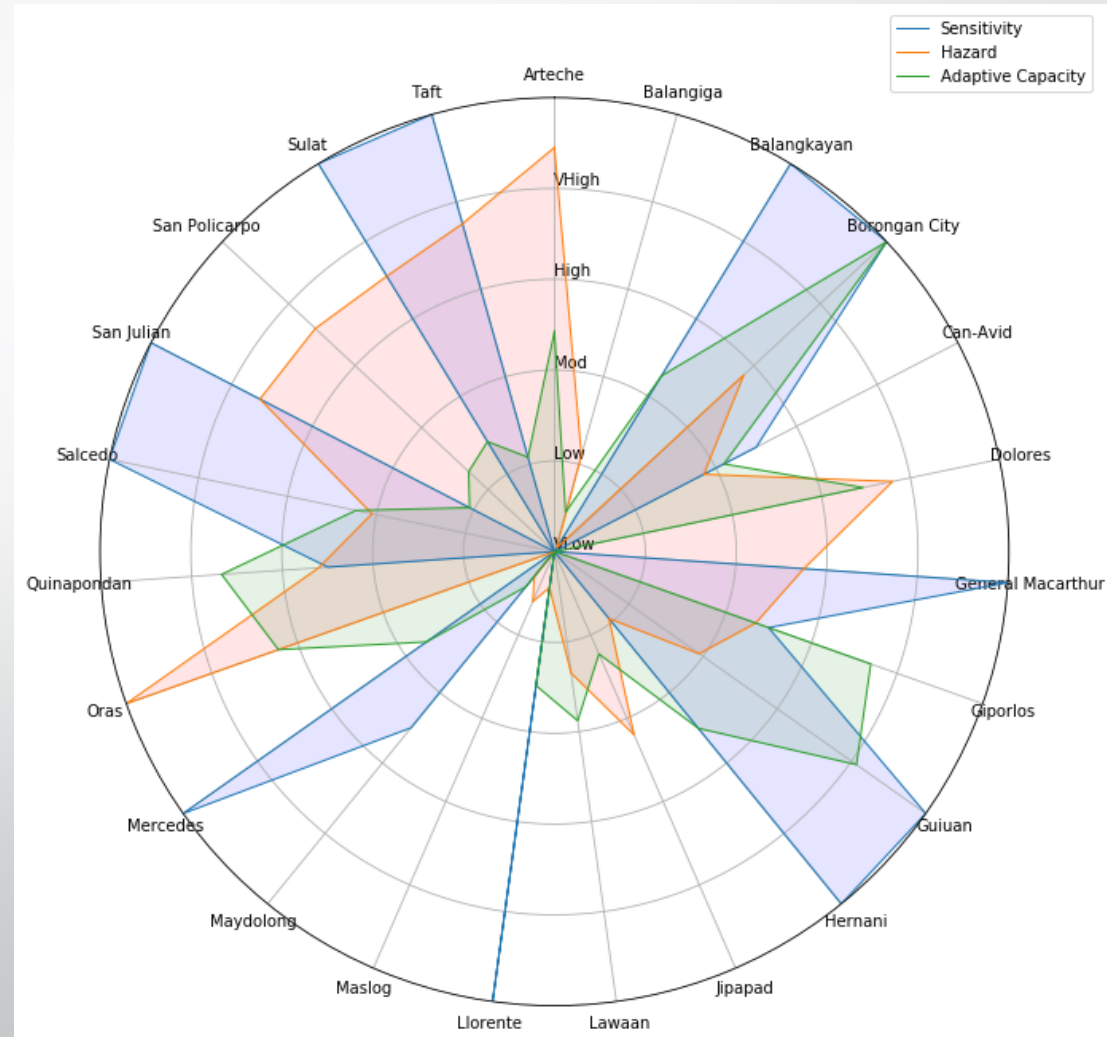


CRVA 2030

IRRIGATED RICE CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050

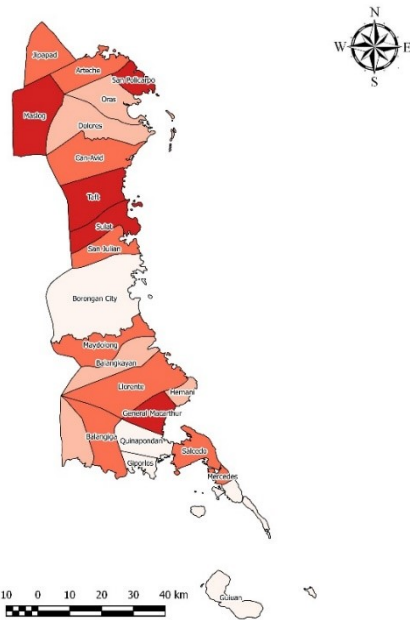


CRVA 2050

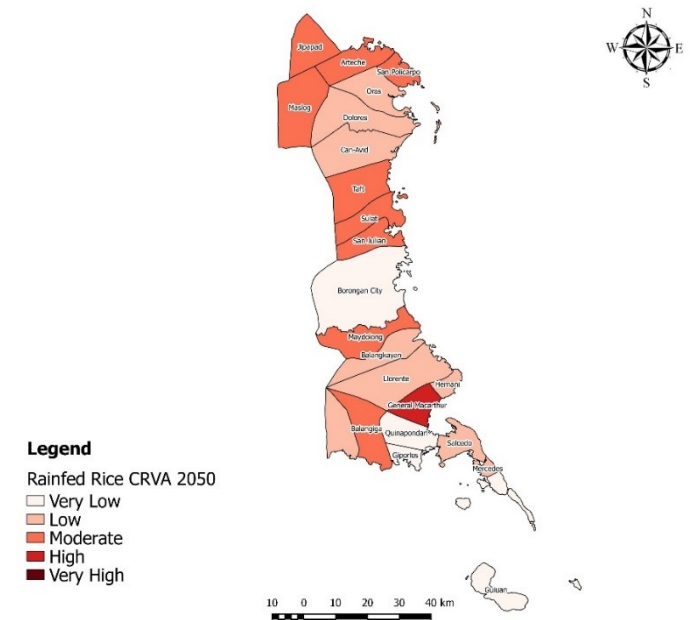


CRVA FOR RAINFED RICE (EASTERN SAMAR PROVINCE)

RAINFED RICE CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030



RAINFED RICE CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050

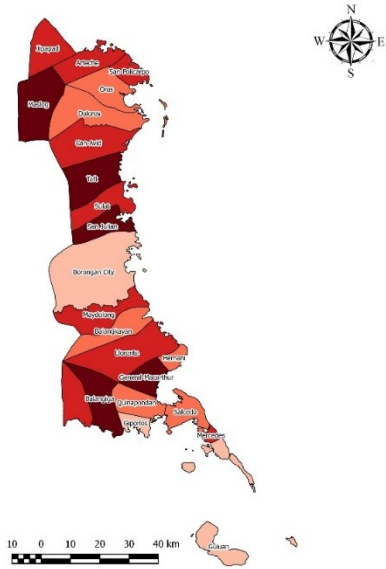


CRVA 2030

CRVA 2050

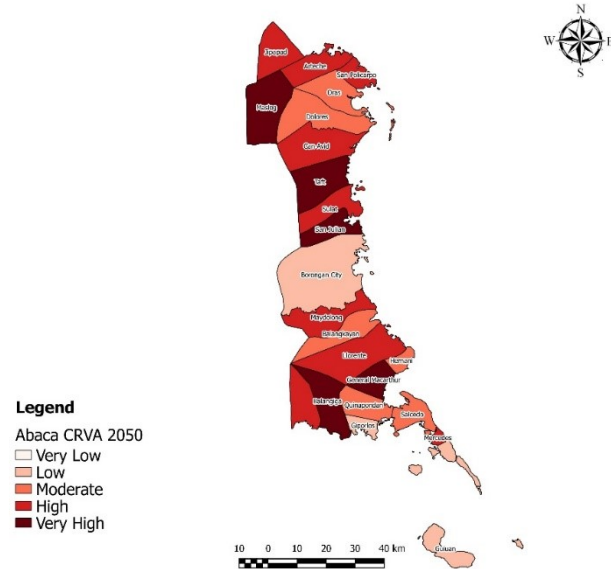
CRVA FOR UPLAND RICE (EASTERN SAMAR PROVINCE)

UPLAND RICE CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2030

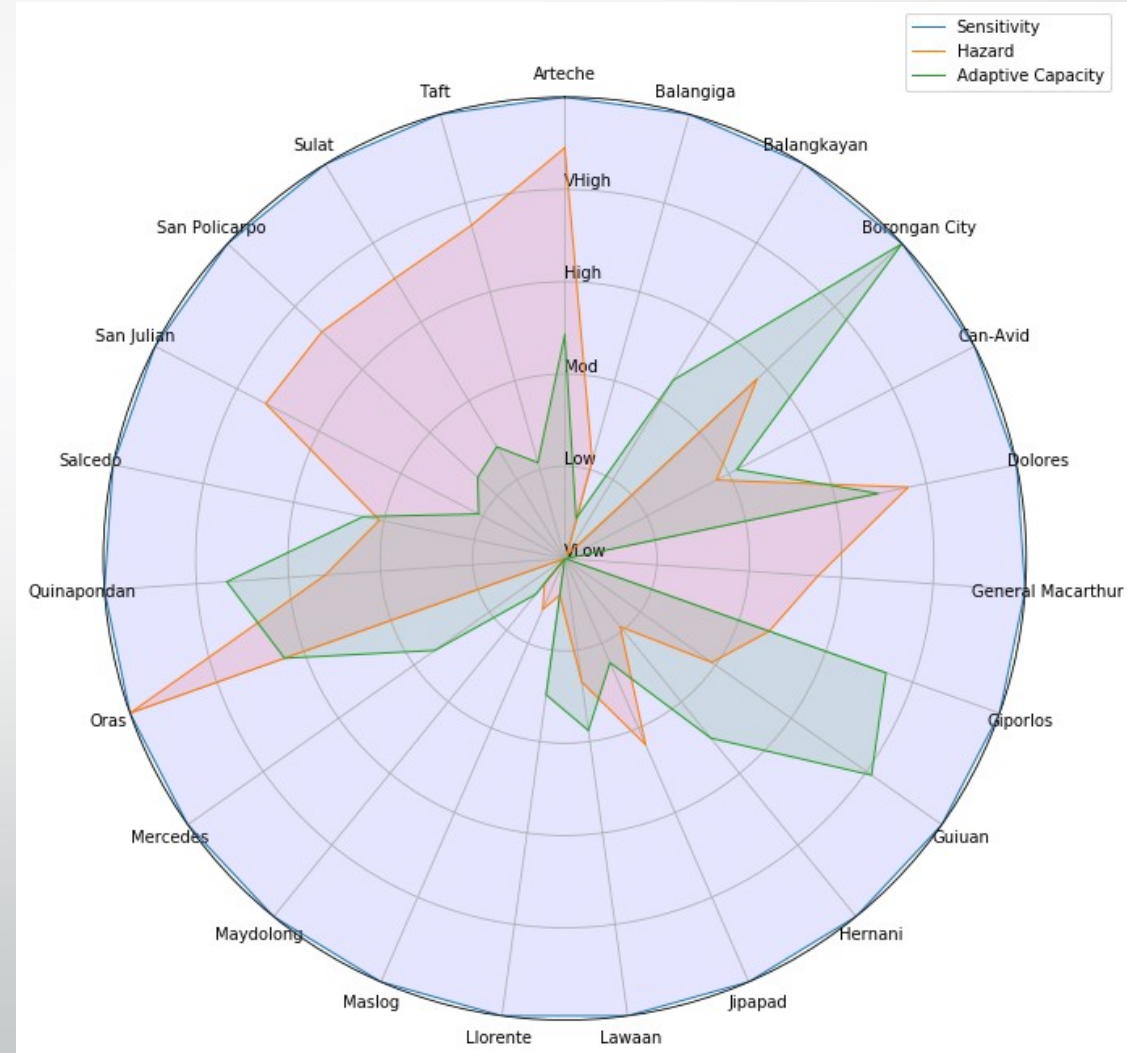


CRVA 2030

ABACA CRVA IN EASTERN SAMAR PROVINCE FOR THE YEAR 2050



CRVA 2050





**Component 1: CRVA-CRA for provinces of Biliran, Southern Leyte,
Eastern Samar and Northern Samar**

Focal Person: Pastor P. Garcia

Activity 1. Climate Risk Vulnerability Assessment (CRVA)

Activity 2. Climate-Resilient Agriculture (CRA) practices prioritization and
planning

Activity 3. AMIA-related seminar-workshops (DA-RFO 8)

Activity 4. Project Management and Monitoring

BUDGET RELEASED FOR COMPONENT 1

Activity	Budget
Activity 1. Geospatial assessment of Climate Risk	1,049,000.00
Activity 2A. Climate-Resilient Agriculture practices prioritization and planning	54,000.00
Activity 2B. Documentation and Cost-Benefit Analysis of Selected CRA practices	497,000.00
Activity 3. AMIA-related seminar-workshops	1,000,000.00
Activity 4. Project Management and Monitoring	1,036,364.00
Direct cost	3,636,364.00
Overhead cost (VSU)	363,636.00
Grand Total	4,000,000.00

FINANCIAL REPORT for COMPONENT 1 (Ph 4M)

PARTICULAR	Approved Budget	1st Realignment	Proposed 2nd Realignment	Amount	Unexpended budget (As of Sept 30, 2020)
A. CRVA					
I. Personal Services					
A. Trav Salaries and Wages	633,600.00	316,800.00	483,619.40	1,434,019.40	
B. Com Honoraria	402,763.98		-	402,763.98	
<i>Sub-Total</i>	1,036,363.98	316,800.00	483,619.40	1,836,783.38	48,000.00
II. Maintenance and Operating Expenses					
A. Traveling Expenses	224,000.00	270,000.00	(30,000.00)	464,000.00	
B. Communications	64,000.00	(25,000.00)		39,000.00	
C. Supplies and Materials	66,000.00	68,200.00		134,200.00	
D. Vehicle Rental	280,000.00	(280,000.00)		-	
E. Representation Expense	828,000.00	(350,000.00)	(35,865.30)	442,134.70	
F. Printing	40,000.00			40,000.00	
G. Other Cost	97,999.62			97,999.62	
<i>Sub-Total</i>	1,599,999.62	(316,800.00)	(65,865.30)	1,217,334.32	291,178.38
III. Equipment Outlay (EO)					
<i>Sub-Total</i>	-			-	
IV. Administrative Cost (10% PS+MOE)					
<i>Sub-Total</i>	363,636.40			363,636.40	
<i>Sub-Total</i>	363,636.40			363,636.40	
B. DA					
A. Supplies & materials	20,000.00		(14,256.60)	5,743.40	
B. Orientation Expense	666,100.00		(311,307.00)	354,793.00	
C. Professional Fee	171,832.00		(1,000.00)	170,832.00	
D. Reg Fee	100,000.00		(50,000.00)	50,000.00	
E. Other cost	42,068.00		(41,190.50)	877.50	
<i>Sub-Total</i>	1,000,000.00		(417,754.10)	582,245.90	50,000.00
GRAND TOTAL	4,000,000.00	-	-	4,000,000.00	389,178.38

PHOTO DOCUMENTATION



CRA PRACTICE SITE VISIT IN BILIRAN AND SOUTHERN LEYTE PROVINCE
AUGUST 5-9, 2019

CROP OCCURRENCE WORKSHOPS



CROP OCCURRENCE WORKSHOP,
MARCH 6-25, 2019, CCE BLDG., VISCA, BAYBAY CITY, LEYTE

FIELD DATA COLLECTION (S. LEYTE)



CROP OCCURRENCE MAPPING, ADAPTIVE CAPACITY AND CRA PRACTICE DATA COLLECTION IN SOUTHERN LEYTE PROVINCE
MAY 6-10, 2019

FIELD DATA COLLECTION (BILIRAN)



CROP OCCURRENCE MAPPING, ADAPTIVE CAPACITY AND CRA PRACTICE DATA
COLLECTION IN BILIRAN PROVINCE
MAY 13-17, 2019

FIELD DATA COLLECTION (E. SAMAR)



CROP OCCURRENCE MAPPING, ADAPTIVE CAPACITY AND CRA PRACTICE DATA
COLLECTION IN EASTERN SAMAR PROVINCE
MAY 27-31, 2019 / AUGUST 26-31, 2019

FIELD DATA COLLECTION (N. SAMAR)



CROP OCCURRENCE MAPPING, ADAPTIVE CAPACITY AND CRA PRACTICE DATA
COLLECTION IN NORTHERN SAMAR PROVINCE
SEPTEMBER 2-13, 2019