Enhancing Capacities for Disaster Risk Reduction in Agriculture

OSRO/RAS/201/EC

Cambodia & Philippines (Bicol & Caraga)

Implementation: Sept. 2012 – Dec. 31, 2013
(18 months)

Humanitarian Aid and Civil Protection

Project objectives

- ***Primary:*** To enhance livelihoods resilience of small-scale farmers and fisherfolks in disaster-prone areas through institutionalization of DRR in agriculture

Project objectives

- ***Specific:*** Improved and institutionalized Knowledge, planning tools and capacities for proactive DRR service delivery in agriculture, including enhanced outreach to farmers in hazard-prone areas

The Project Areas:

BICOL Region (8 Mun/22 Bgy)

- **Albay** (3 Bgy/Mun)

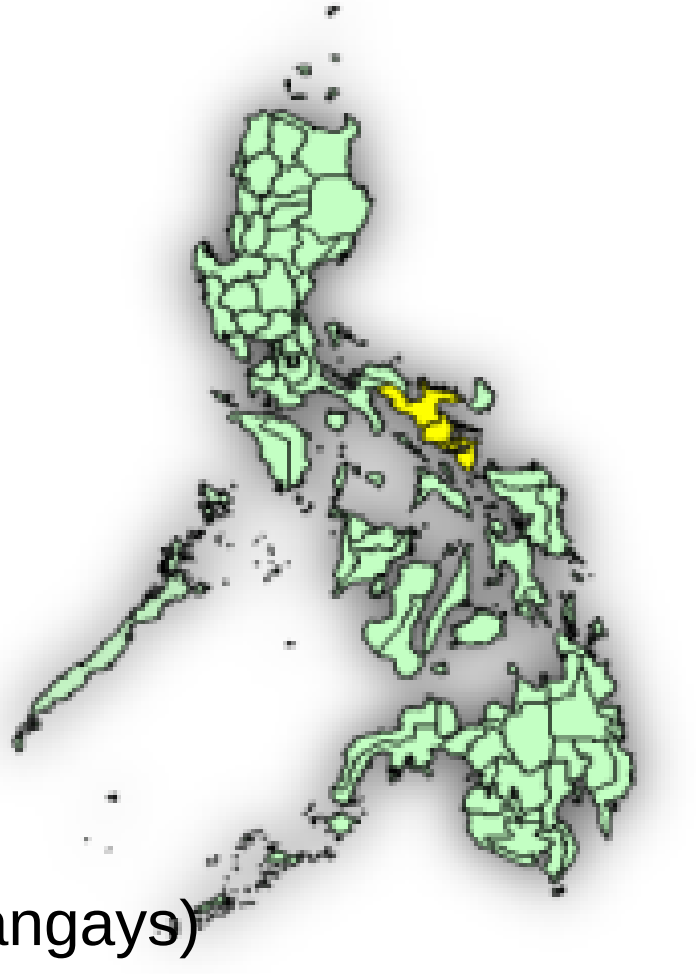
  Ligao, Camalig, & Libon

- **Sorsogon** (3 Bgy/Mun)

  Gubat, Irosin & Casiguran

- **Catanduanes** (2 Bgy/Mun)

  Bato & San Miguel



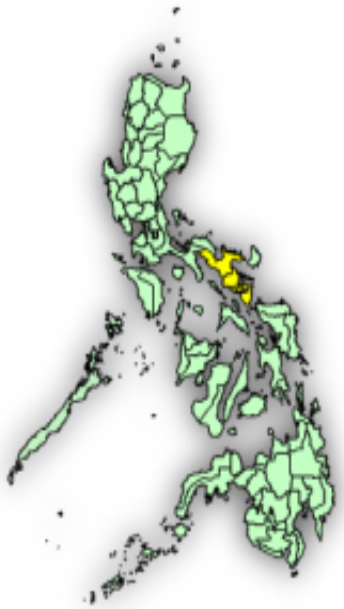
CARAGA Region

- Surigao del Norte (4 Mun., 6 barangays)

The Project Areas:

Prov.	Albay			Sorsogon			Catanduanes	
Mun./ City	Camalig	Libon	Ligao City	Casigur an	Irosin	Gubat	Bato	San Miguel
Barangays	Gotob	Along-ong*	Barayong*	Boton*	Bulawan*	Carriedo	Libjo*	Buhi
	Tagaytay*	Buga*	Mahaba*	Burgoz*	Gabaw*	Ugao	San Roque*	Katipunan
	Ligban*	Nogpo*	Nabonton*	Sta. Cruz*	Gulang-Gulang*	Tiris		

* Barangays with FFS; Irosin-CFS



- **Municipalities:** selected based on their location to a nearby PAGASA agro-met/synoptic station (to facilitate the provision of farm weather bulletins/climate outlooks & advisories: under Result 7)
- **Barangay Selection:** the criteria was adopted from the TCP Project;

Partners	Major Roles
DA/ BFAR (fisheries)	Overall project coordination and management, GPOs for lowland ecosystems, facilitation in the development of regional PoA, Information bulletins, Monitoring
BU	GPOs for upland, lowland and Fishery, and developing M & E Guidelines
CBSUA	Local DRM plans, PDNA Software improvement & dissemination
PAGASA	Climate Information bulletins/trainings
LGU's	Assist in the coordination/monitoring at the farm level, dissemination of information on GPOs and bulletins, data collection for PDNA, trainings (enhanced DRR planning & development of local PoA, interpretation and use of climate information bulletins, use of online PDNA tool)

Key Result Areas

Promoting institutionalization of DRRM in agriculture

- ***Result 1***: Capacities and tools for better planning and implementation of DRR in agriculture developed and institutionalized at the DA-RFU V, LGUs and barangays
- Result 2: GPOs for upland, lowland and Fishery, and developing M & E Guidelines
- Result 3: Climate Information bulletins/trainings
- ***Result 4***: Improved PDNA methodology for agriculture, including web-based application software installed and expanded with for two more crops beside rice.

Methodological Framework

Input

- Criteria for selecting project sites
- Identified Provinces, Municipalities and Barangays
- Letter of Agreement (LOA) specifying tasks and deliverables of partner agencies
- Organized Project team and tasking
- Selection of partner SUCs
- Detailed work plan and budget
- Training designs
- Training modules for capacity development of LGUs and Barangay
- Commodity statistics for the PDNA
- Monitoring and evaluation tools

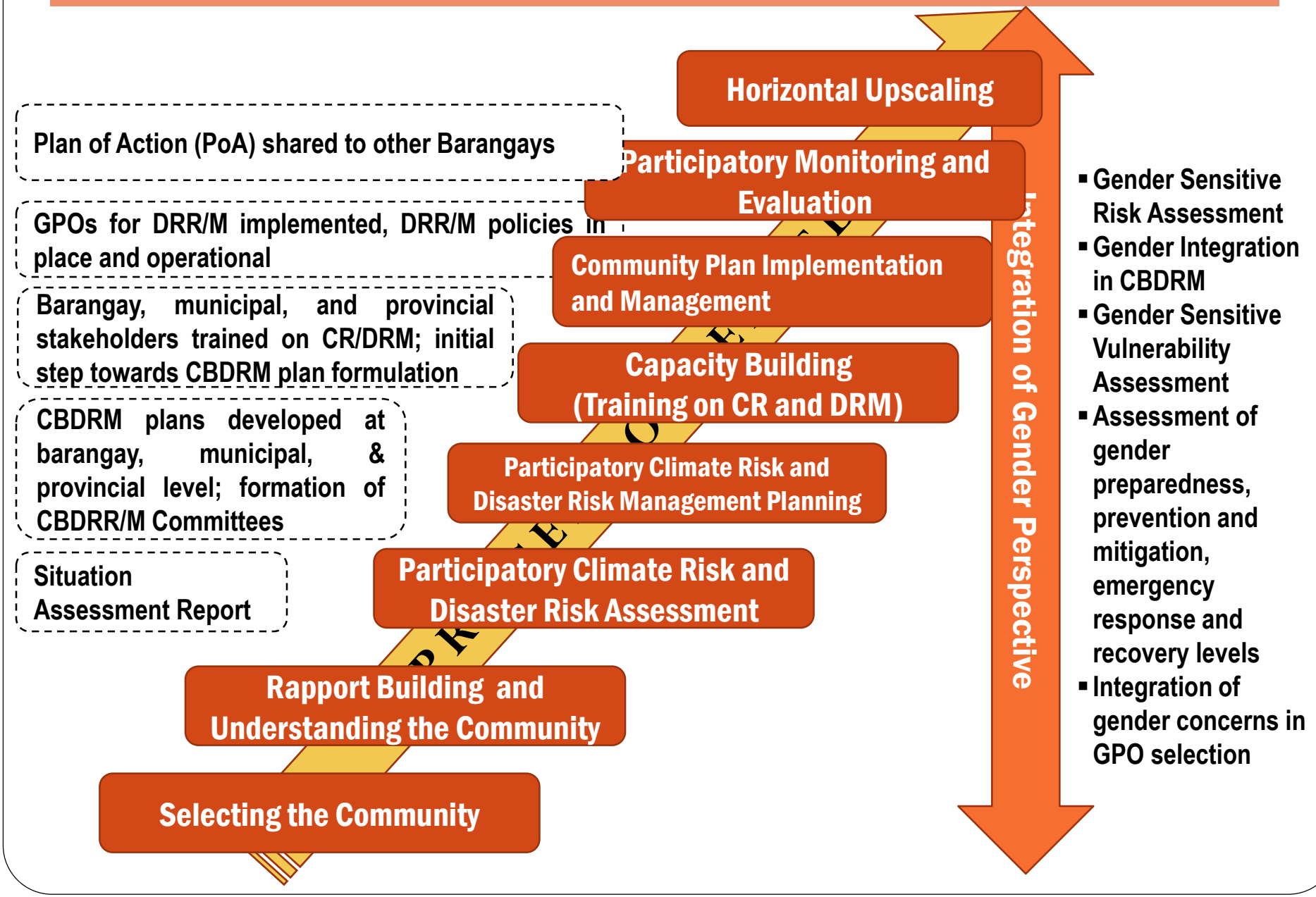
Process

- Participatory Situation Assessment
- Capacity development
  - 2 day training on use of E-Learning Tool in planning for CBDRM and CCA
  - Training of LGU technical staff on developing DRR/M plans and use of PDNA tool for agriculture (rice, corn, coconut and abaca)
  - Engaging/assisting municipal and barangay officials and stakeholders in participatory process of preparing local DRR/M plan of action (PoA) in the agriculture
  - Providing advice to the LGUs in operationalization of plans as integrated aspects of regular development plans at decentralized levels
  - Horizontal up-scaling
  - Monitoring and evaluation

Output

- Documented and disseminated the experience, and achievements in developing CBDRR/M PoA at municipality and barangay levels
- Developed written guidelines for replication of the process for municipal DRRMCs and other interested partners in other regions
- Developed PDNA software
- **Developed resilient communities**

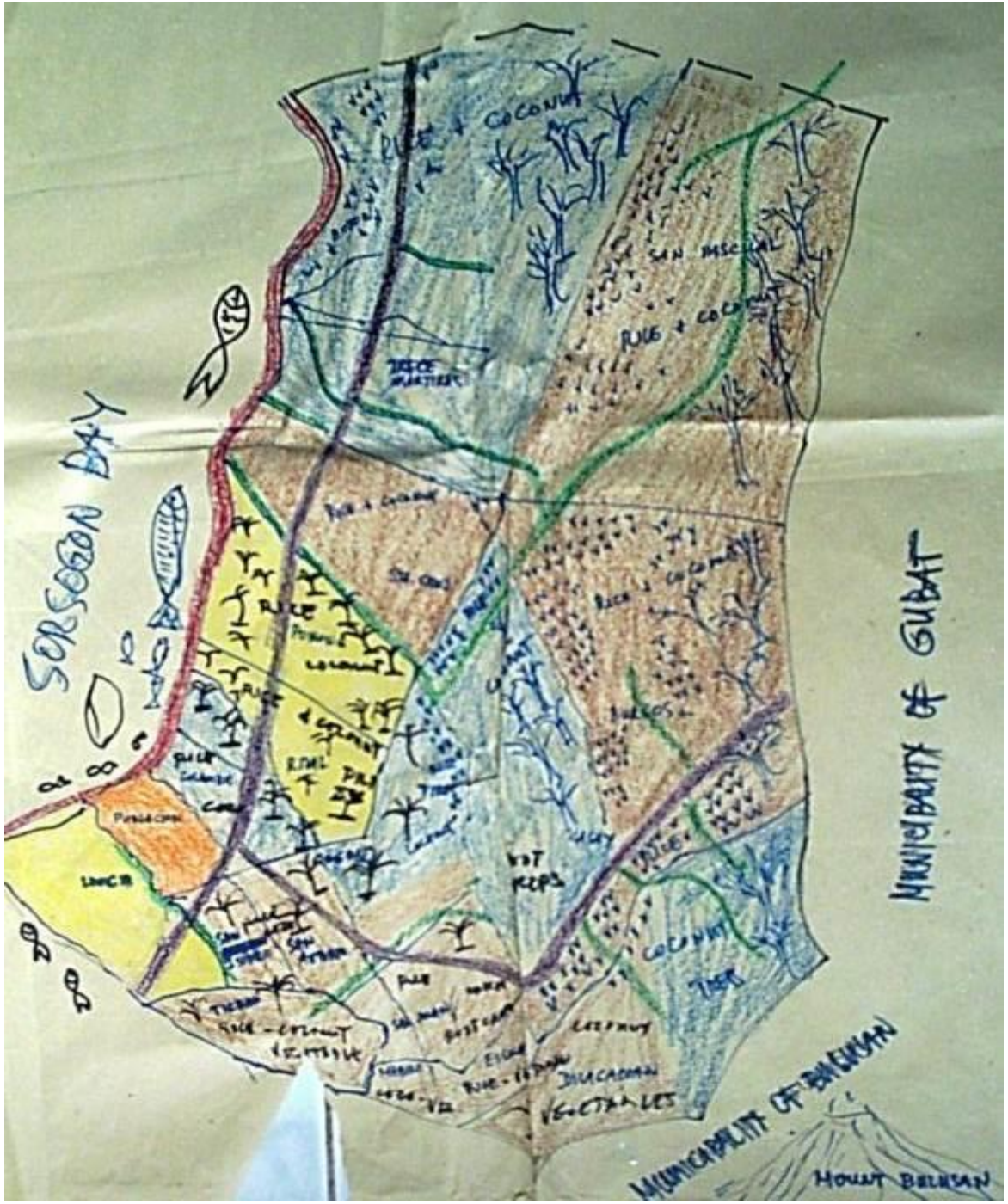
Catalizing Participatory CBDRM Planning Process



Geographical Coverage and Key Outputs

- Developed 28 barangay & 12 Municipal PoAs to implement RA 10121 including mainstreaming agricultural concerns
- Technical Capacity Building for DRRM Planning
  - Municipal level training: DRR – CCA in agriculture
    - 3 in Albay and Sorsogon, and 2 in Catanduanes
    - 4 in Surigao
  - Barangay Level training: DRR – CCA in agriculture
    - 22 in Bicol
    - 6 in Caraga
- Signed MOA for continued collaboration on DRRM

  Between and among the RDC of Caraga, Provincial Govt. of Surigao del Norte, Surigao State University, CBSUA and DA RFU V



Sample of knowledge Products from the workshops

Hazard Map of Gubat, Sorsogon

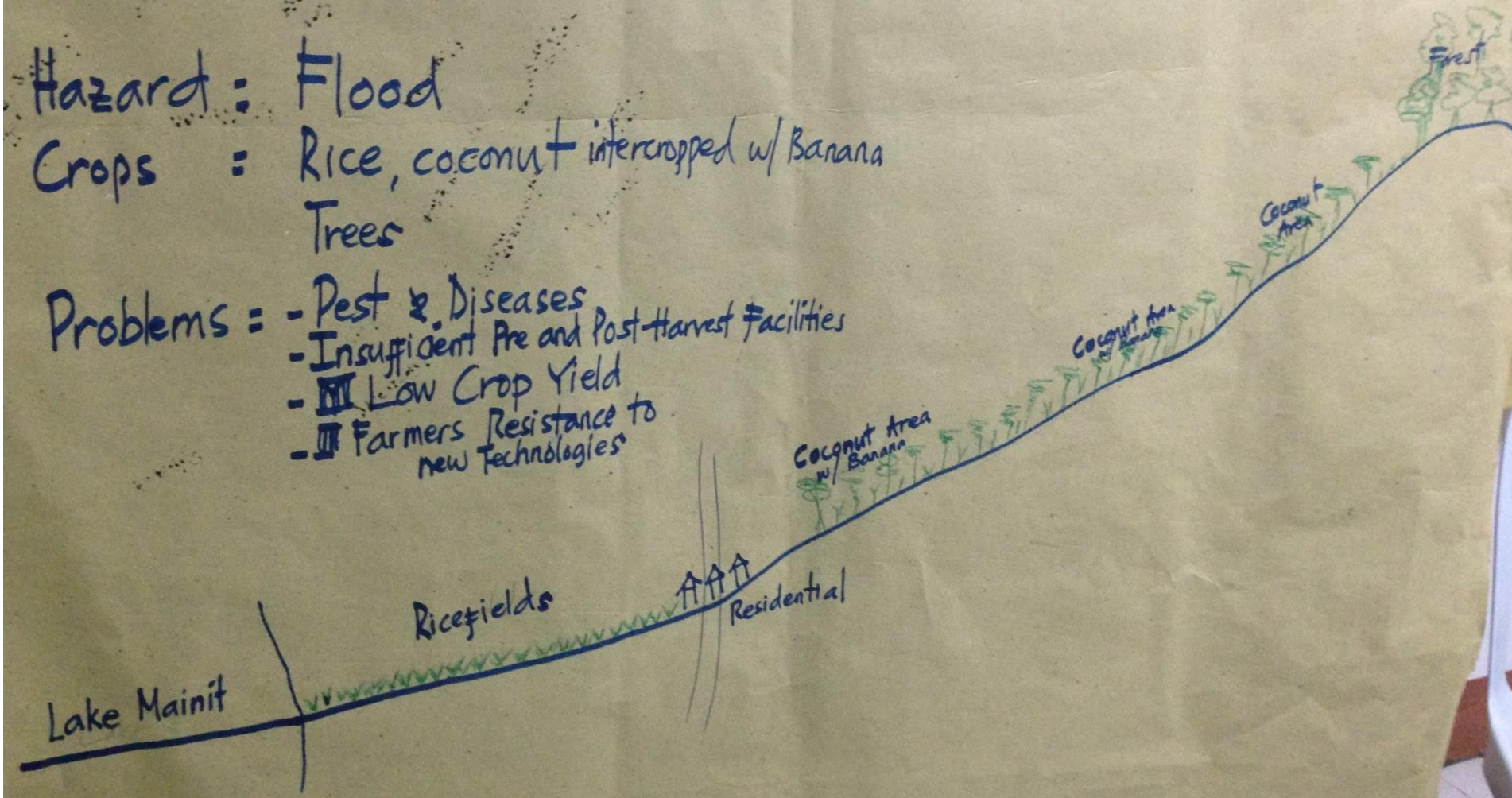
TRANSECT LINE

Brgy. : San Isidro, Mainit, Surigao del Norte

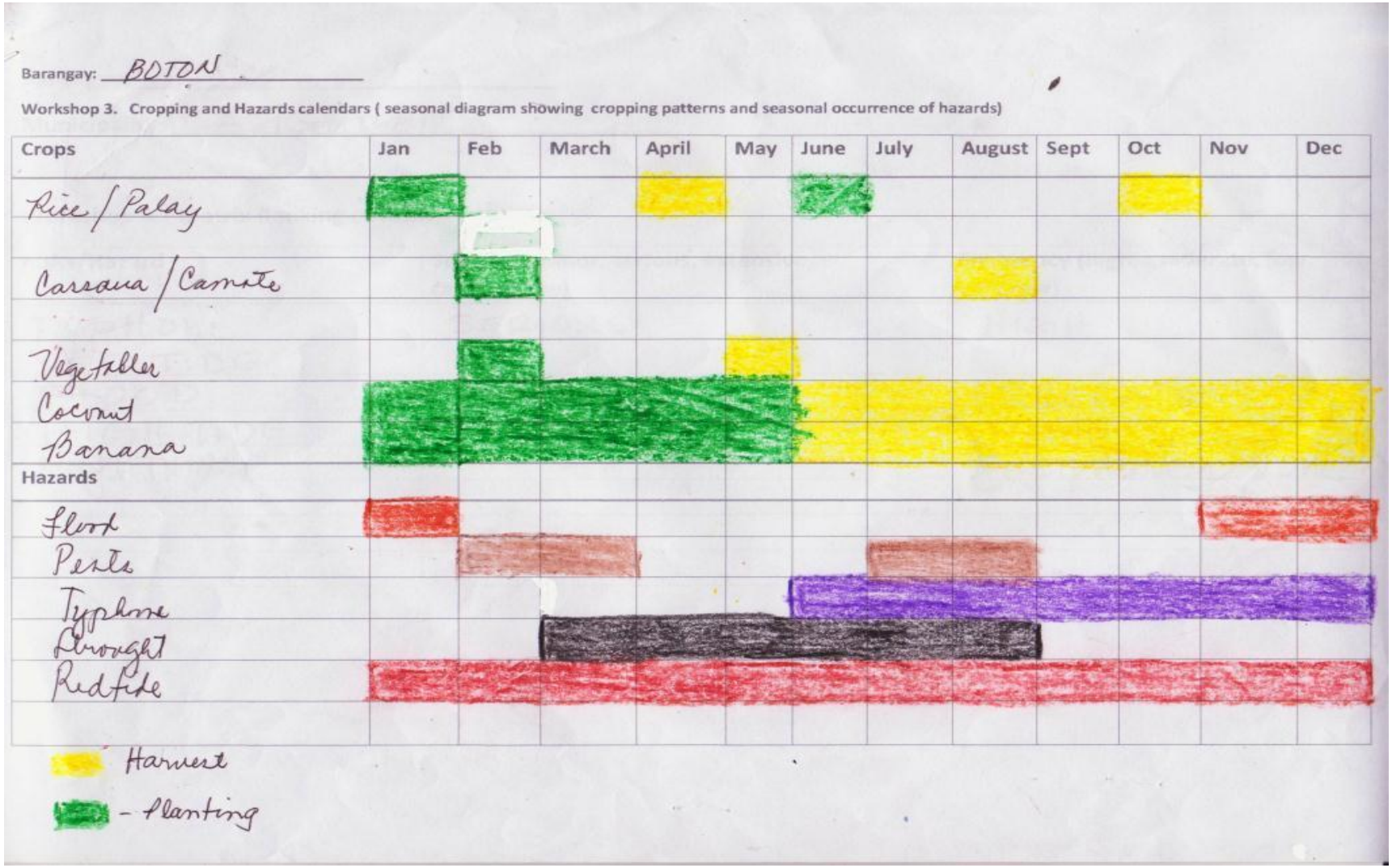
Hazard : Flood

Crops : Rice, coconut intercropped w/ Banana
Trees

Problems : - Pest & Diseases
- Insufficient Pre and Post-Harvest Facilities
- Low Crop Yield
- Farmers Resistance to new technologies



Cropping and Hazard Calendar in Barangay Boton, Casiguran, Sorsogon



Cropping and Hazard Calendar in Brgy. Katipunan, Catanduanes

CROPS	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
1.Palay												
2.Peanut												
3.Corn												
4.Camote												
5. Cassava												

HAZARD	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
1. Golden kuhol												
2. Rats												
3. Rice bugs												
4. BettleUang												
5.Aphids												
6.Birds												
7.Typhoon												
8. Flood												
9. Heavy Rains												
10. Drought												

Livelihood assets pentagon assessment

EXERCISE

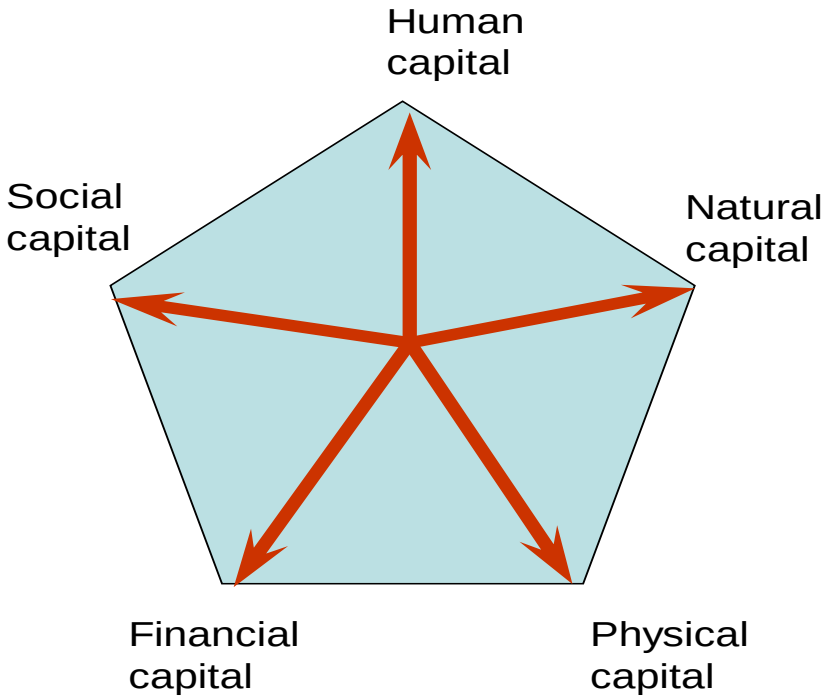
Drawing the assets pentagon for your community

Instructions

1 - Draw a pentagon for your community

2 – How would the asset base be affected or depleted in the event of typhoon and floods? Drought and pests? Volcanic eruption?

3- What DRM interventions would you recommend, and why?

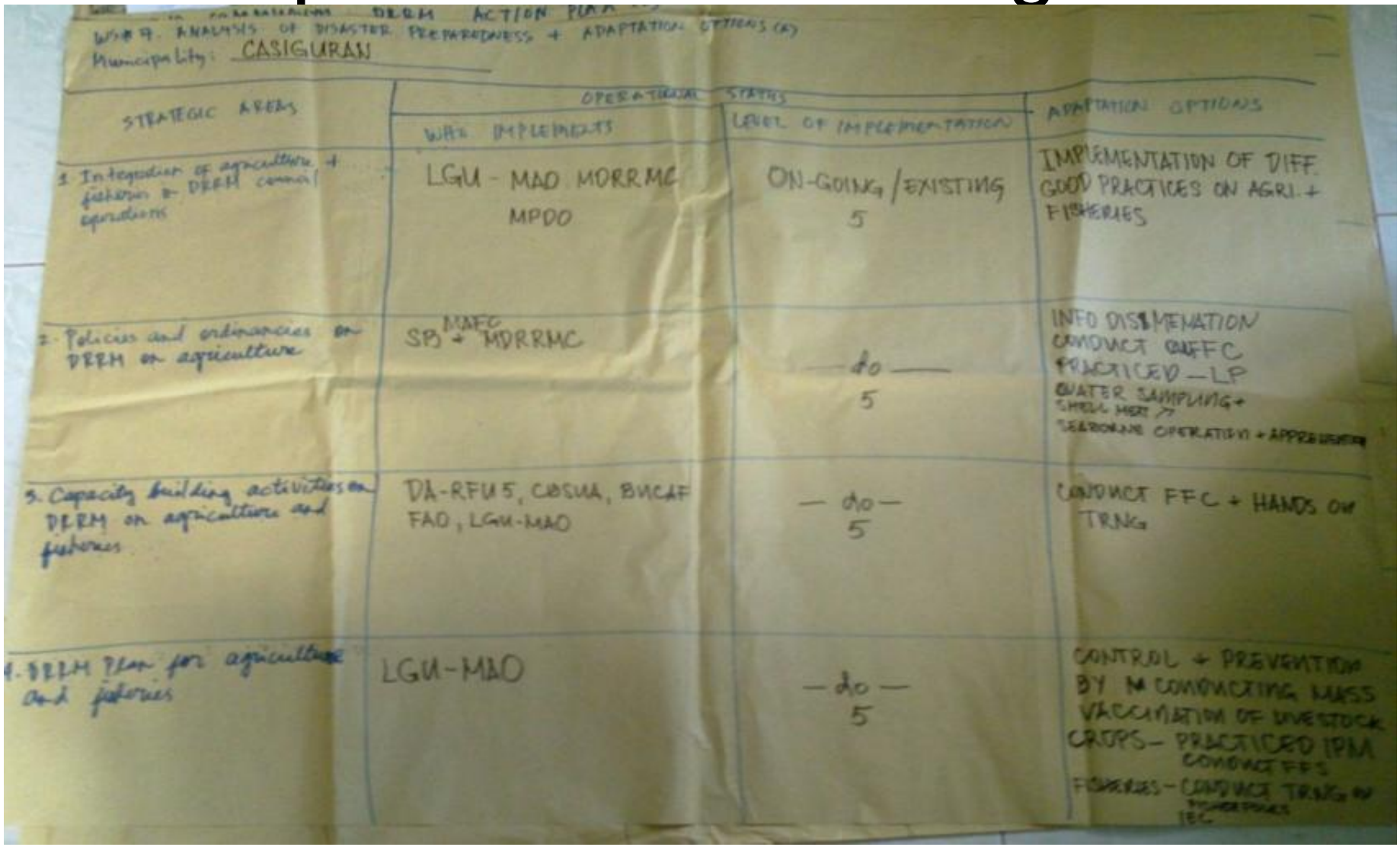


WS # 5: HAZARD + RISK ASSESSMENT BY TYPE OF HAZARD

Municipality: CASIGURAN

HAZARD (Peligro)	WHEN DOES IT USUALLY OCCUR? (Kailan laging nangyayari?)	IMPACT (Epekto)	WHO ARE MOST AFFECTED? (Sino ang pinakaapektado?)	COPING MECHANISM/ STRATEGIES (mga gingibo para dai mamatiay maray an epekto)
TYPHOON	August — Dec.	Loss of lives Crops damage Livestocks damage Landslide Flood Commercial and Residential destruction	Human, Animals, plants Infrastructures, Farmers, Fishermen,	* Preparedness through info. dissemination, drill
FLOOD	JAN, NOV. DEC	— do —	— do —	— do —
~~SEA~~ WATER INTRUSION	JUL. — AUG.	Crop damage Low production	Farmers/Fishers folk	* Plant resistant and adaptation variety seeds. * Construction of Seawall
RAT INFESTATION	JAN — FEB, NOV. — DEC	Crop damage Low Production	Farmers/Fishers folk	* Baiting/Rodenticide * ~~Sig~~ IEC
~~RED~~ RED TIDE OCCURENCE	Case to Case	Loss of lives Low income	Farmers/Fishersfolk	* IEC * Regular Monitoring and Sampling water and Screening * Imposition of Policies

Analysis of Disaster Preparedness in Casiguran

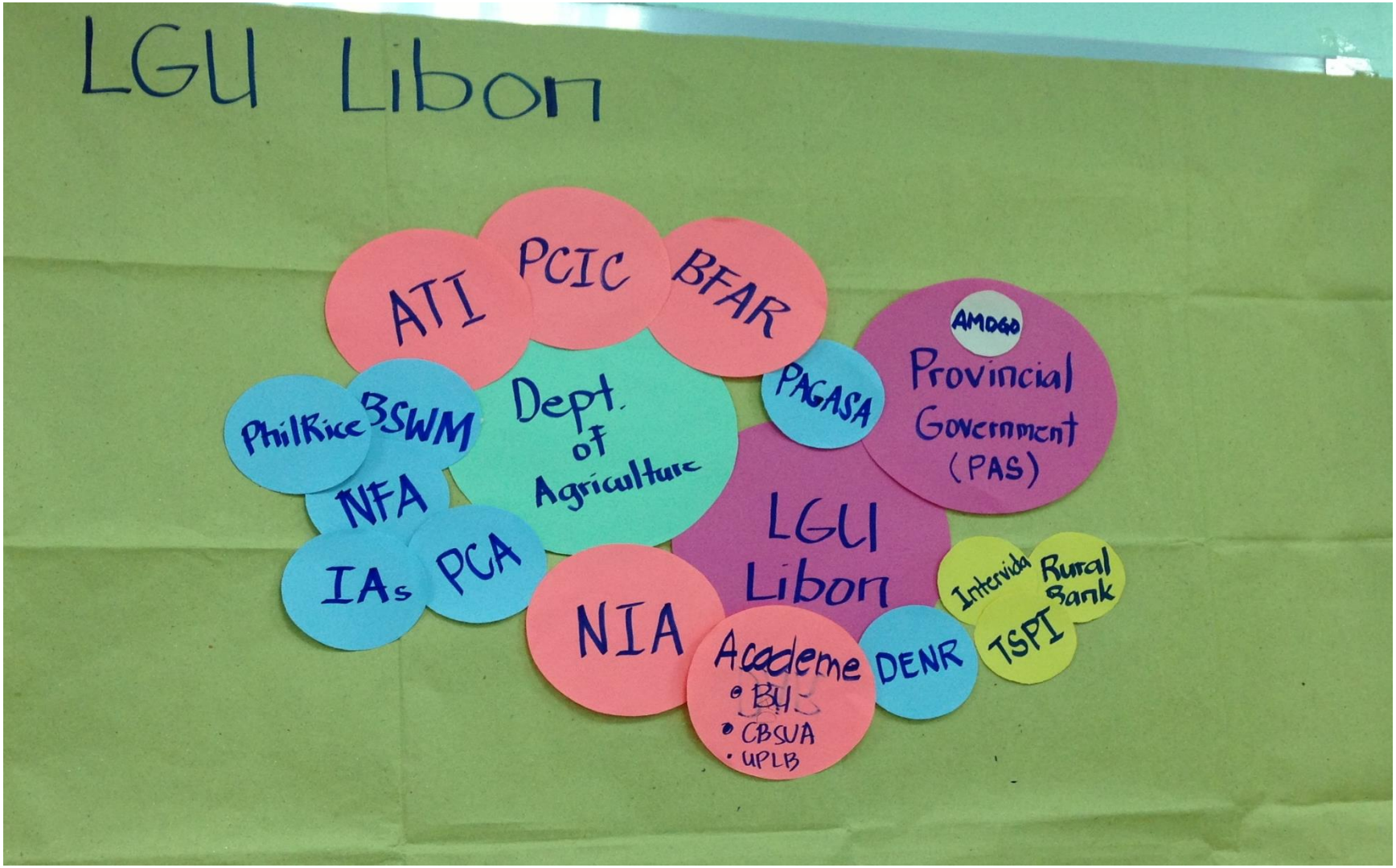


WS#7. ANALYSIS OF DISASTER PREPAREDNESS + ADAPTATION OPTIONS (A)

Municipality: CASIGURAN

STRATEGIC AREAS	OPERATIONAL STATUS: WHO IMPLEMENTS	OPERATIONAL STATUS: LEVEL OF IMPLEMENTATION	ADAPTATION OPTIONS
1. Integration of agriculture + fisheries in DRRM council operations	LGU - MAO MDRRMC MPDO	ON-GOING / EXISTING 5	IMPLEMENTATION OF DIFF. GOOD PRACTICES ON AGRI. + FISHERIES
2. Policies and ordinancies on DRRM on agriculture	SB + MAFC MDRRMC	— do — 5	INFO DISSEMENATION CONDUCT OAFFC PRACTICED — LP WATER SAMPLING + SHELL MEET SEABORNE OPERATION + APPREHENSION
3. Capacity building activities on DRRM on agriculture and fisheries	DA-RFU 5, CBSUA, BUCAF FAO, LGU-MAO	— do — 5	CONDUCT FFC + HANDS ON TRNG
4. DRRM Plan for agriculture and fisheries	LGU-MAO	— do — 5	CONTROL + PREVENTION BY CONDUCTING MASS VACCINATION OF LIVESTOCK CROPS — PRACTICED IPM CONDUCT FFS FISHERIES — CONDUCT TRNG ON FISHERIES IEC

Institutional Analysis thru Venn Diagram



WORKSHOP 6. ANALYSIS OF DISASTER PREPAREDNESS AND ADAPTATION OPTIONS

Municipality: BACUAG Barangay: CABUGAO

STRATEGIC AREAS	OPERATIONAL STATUS		ADAPTATION OPTIONS	GAPS/NEEDS
	Who implements	Level of implementation		
1. Integration Of Agriculture And Fisheries In DRRM Council Operations	MDRRMC	3		~~Organized~~ Active the integration of Agriculture & Fisheries Adopt
2. Policies And Ordinances On DRRM On Agriculture	MDRRMC	2		Create Policies & Ordinances on DRRM on Agriculture
3. Capacity Building Activities On DRRM On Agriculture And Fisheries	MDRRMC	2		Conduct Capacity Building Activities
4. DRRM Plan For Agriculture And Fisheries	MDRRMC	2		Formulate DRRM Plan for Agriculture
5. Collaboration And Coordination With Relevant Agencies	MDRRMC	2		Activate the Collaboration and Coordination
6. Technology Options For Agriculture	MAO	3		Conduct Demonstration and IEC
7. Technology Options For Fisheries	MAO	3		Conduct Demonstration and IEC
8. EWS For Agriculture And Fisheries	MAO	✓		Install EWS for Agriculture and Fisheries

LEVEL OF IMPLEMENTATION

5 – Existing and being implemented

4 – Existing and starting to implement

3 – Existing but not implemented

2 – Not yet existing but it has already been deliberated (Planning to implement)

1 – Not yet existing, not interested to implement

Analysis of Gender Roles in DRM

WORKSHOP 7. GENDER ROLES ANALYSIS IN AGRICULTURE AND FISHERIES

Municipality: Claver **Barangay:** Daywan

GENDER ROLES	BEFORE THE DISASTER		DURING THE DISASTER		AFTER THE DISASTER	
	WOMEN	MAN	WOMEN	MAN	WOMEN	MAN
Ensures food availability		✓		✓		✓
Ensures food security		✓		✓		✓
Preparing food	✓		✓		✓	
Caring for children and elderly	✓		✓		✓	
Secures the capital for the inputs		✓		✓		✓
Attend trainings/ seminars on agriculture and fisheries		✓		✓		✓
ON FARMING						
Pasturing of livestock		✓		✓		✓
Feeding of livestock	✓		✓		✓	
Feeding of poultry		✓		✓		✓
Preparing land		✓		✓		✓
Planting crops		✓		✓		✓
Controlling weeds		✓		✓		✓
Applying fertilizer		✓		✓		✓
Controlling pests and diseases		✓		✓		✓
Does the early harvest		✓		✓		✓
Harvesting	✓	✓	✓	✓	✓	✓
Preparing/ Processing to market	✓		✓		✓	
Selling of harvest	✓		✓		✓	
Storing seeds		✓		✓		✓

ORKSHOP 10. COMMUNITY DRRM PLAN OF ACTION

MUNICIPALITY: Mainit **BARANGAY:** _____

INDICATOR	OBJECTIVES	PROJECTS/ ACTIVITY	TIMETABLE	RESPONSIBLE UNIT
1. MULTI-HAZARD RISK AND VULNERABILITY ASSESMENT	To lessen the impact of multi-hazard risk and vulnerability in our / municipality/barangay	- Construction of flood control & drainage in Sn Isidro/Magpayag - Dredging of silted Riverbanks	2014-2016 2014-2016	LGU - DA - DSWD - DPWH LGU - DA - DPWH
2. LEGAL AND INSTITUTIONAL ARRANGEMENTS FOR DRM -CCA	Institutionalise in the CBDRM and CCA Plan the concerns of Agriculture and Fisheries sectors	- adoption, approval & implementation of zoning, environmental, safety plan and solid waste ordinances - adoption of sustainable/organic farming thru an ordinance	2014-2016	LGU (SB, NGO, CSO,
3. DRM/CCA PLANNING AND MONITORING	To come up with a DRM - CCA plan and monitoring tool	- Implementation of approved DRR-CCA plan - Formulation of monitoring tool for DRR - CCA	2013-2016	
4. DISASTER MANAGEMENT INFORMATION SYSTEM AND AWARENESS-RAISING ON DRR - CCA	Promote awareness on DRR for Agriculture and Fisheries	- Continuous FFS conduct - IEC on DRR/CCA to farmers & fisherfolks -	2013-2016	LGU, MAO, MDRRMO, AT, MPDO
5. LAND USE PLANNING	- Develop a land use plan in the Municipality/Brgy. - Minimize vulnerability of the area to various hazards	- Revision & implementation of land use & zoning ordinance - Strict enforcement of building code & safety plan	2013-2023	LGU LGU
. PROMOTION OF AZARD PROOF ECHNOLOGIES	To enhance adoption of climate smart and hazard proof technologies in agriculture and fisheries	- Promotion of AMICAF project - Conduct of FFS, IEC to farmers - Aqua culture project to farmers/fisherfolks	2013-2016	LGU - DA .. BFAR
PREPAREDNESS	To minimize the impact of natural and man-made hazards	- IEC on DRR/CCA - ~~Conduct~~ Const. of flood control & drainage - Dredging of silted riverbanks	2014-2016	LGU, DA, DSWD, DPWH
MULTI-HAZARD EARLY ARNING SYSTEMS	To be fully aware of potential hazards such as floods due to	- Installation of water level gauge, signages & early warning device at Lake mainit & rivers -	2013-2016	LGU, OXFAM, PAG-ASA

Municipal DRRM Plan

INDICATOR	OBJECTIVES	PROJECTS/ ACTIVITY	TIMETABLE	RESPONSIBLE UNIT	BUDGET
8. MULTI-HAZARD EARLY WARNING SYSTEMS	Preparedness & awareness disaster	- organize/ establish EWS	2013	Preparedness & awareness disaster	P 6000
9. IMMEDIATE RESPONSE AND RELIEF	Minimal yield loss	Improved PCIC	2013	Minimal yield loss	P 15, 000
10. ASSESING DAMAGE & LOSS AND PLANNING RECOVERY	Know thru percentages of damage	- monitor & survey	2013	OMAG	
11. INFRASTRUCTURE REHABILITATION (BUILDING BACK BETTER)	- Easy transport of priority of farm to market - inform MDRRM, DILG, LGU	- Bayanihan system - fund sourcing	2013	OMAG	
12. LIVELIHOODS RECOVERY & REHABILITATION	Increase/ agreement income	- training for food processing - seed distribution - assistances/ aid from different sector & NGOS - animal & fingerlings seek dispersal	2013	OMAG	P 20, 000
13. RISK TRANSFER	Share knowledge to other for preparation of disaster risk management	- Information dissemination - conduct seminar	2013	OMAG	P 25,000
14. SCALING-UP CBDRM	Re- echo	- meeting - assembly - dialogue	2013	OMAG	P 25, 000

Lessons Learned

- Institutionalizing climate change adaptation and disaster risk reduction programs, projects, and activities need local participation especially by officials of the barangays and municipalities
- Formation of the BDDRM committee was necessary to pursue DRRM initiatives particularly in agri-fisheries sector, under the guidance of the Municipal Agriculture Office
- Capacitating of local officials on DRRM in agri-fisheries can ensure implementation of the M/BDRRM plans with funding support from the barangay and municipality IRA.

Results, Activities & Partners

Result	Description	Activities	Lead Agencies
2	***Good Practice Options*** for DRR/M widely disseminated and replicated	◻ Selection of barangays for replication ◻ CBA: good practice replications /techno-demo (ideal for FFS sites) ◻ Technical briefings and location-specific good practice options	◻ BU ◻ DA ◻ BFAR

Good Practices

- LGU – Agriculture Office replicated the barangay DRRM process in other barangays by tapping our trained barangay officials and farmer leaders in pilot barangays
- DRRM plans include agriculture concerns like promotion of good practice options, livelihood resilience through the seasonal cum hazard calendar and other technologies, risk transfer
- Facilitated immediate reporting of post disaster damage; no more guesstimates of crop damages- easy estimation of insurance cover

Good Practices

- Good practices in agriculture and fisheries are made observable to farmers and fisherfolks
- Include in their plans community seed banking, evacuation of animals, evacuation kit with seeds for immediate planting
- Cropping pattern developed
- Farmers become more aware and can now interpret emergency signals and how to mobilize community actions

Results, Activities & Partners

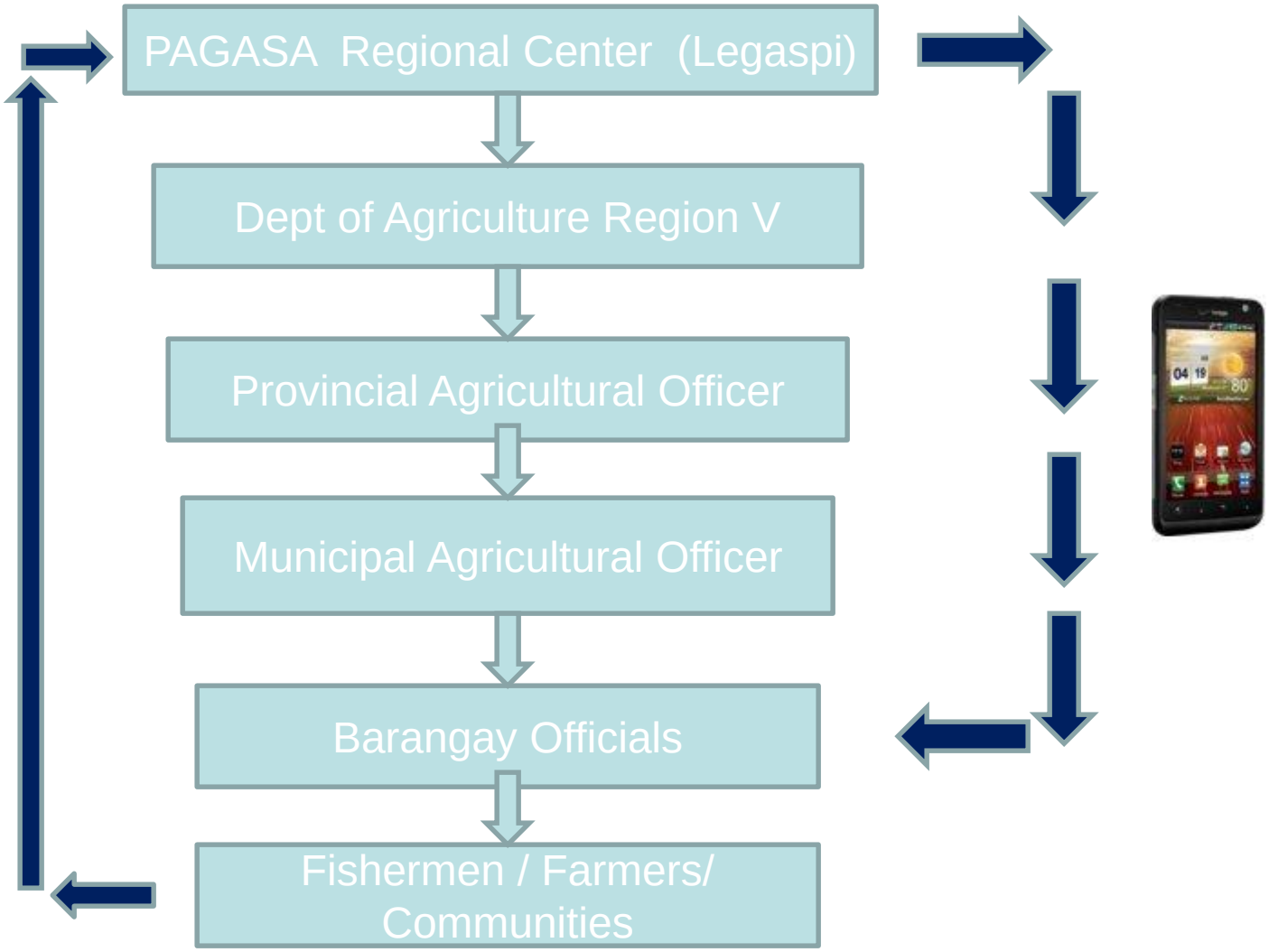
Result	Description	Activities	Lead Agencies
3	Enhanced ***Climate Information Products*** for ***agriculture*** regularly prepared and disseminated	▫ Regularly and timely provision of farm weather bulletins/climate outlooks & advisories ▫ Training on the interpretation and use of climate advisories information	▫ DA ▫ PAGASA

Early Warning System for Agriculture and Fisheries (Bicol Region)”

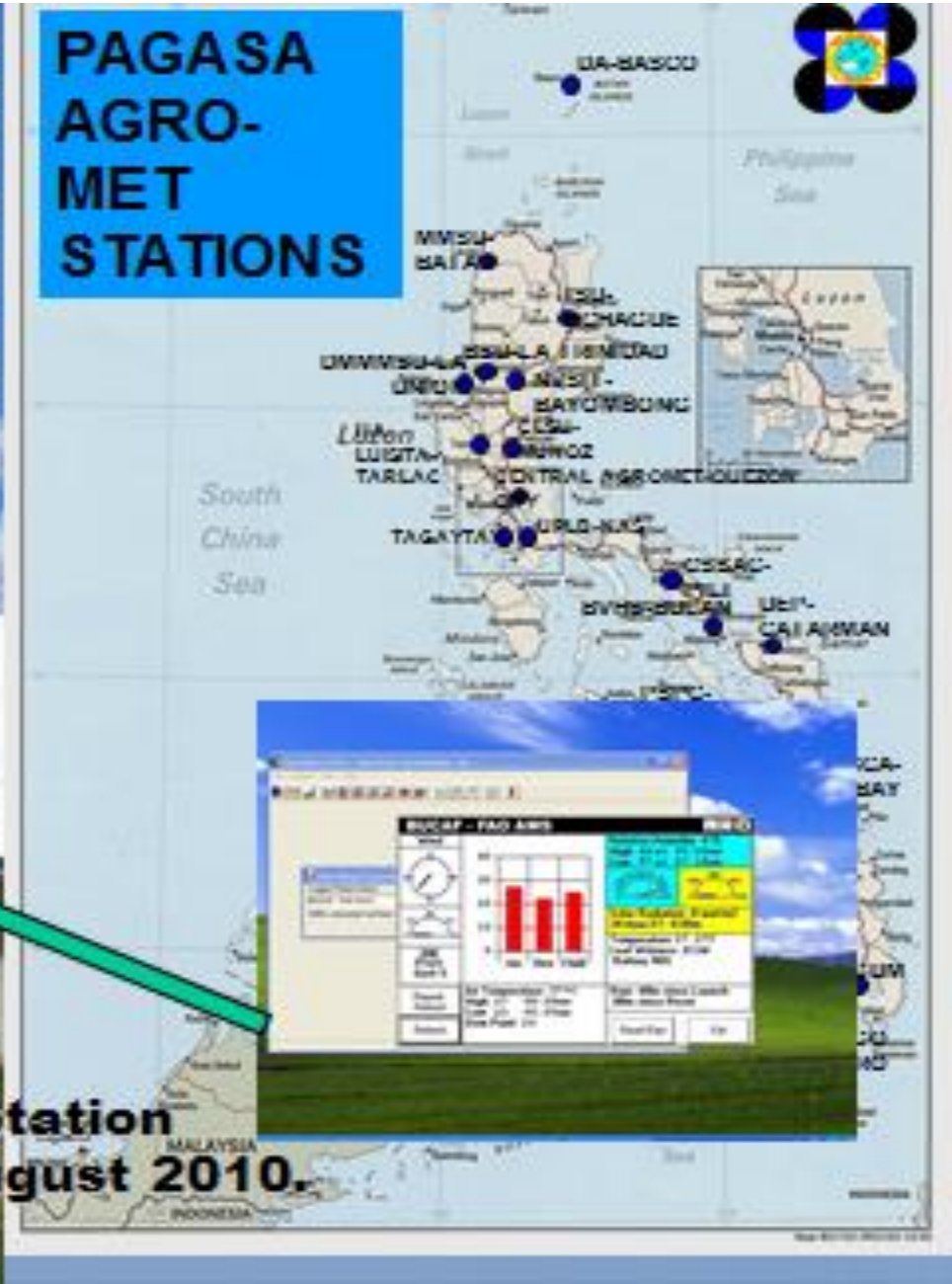
Calendar of weather hazards (source: PAGASA-Region V)

Months/ Hazards	J	F	M	A	M	J	J	A	S	O	N	D
Amihan (NE monsoons)	Amihan (NE monsoons)									Amihan (NE monsoons)		
Habagat (SW monsoon)					Habagat (SW monsoon)							
				Transition								
No. of Typhoons (Bagyo)	1	1	1	1	1	3 – 4	3-4	2 – 3	2 – 3	2 – 3	2 – 3	1 – 2
ITCZ							ITCZ (malawakang kaulapan)					
Cold Front	Cold Front										Cold Front	
Thunderstorms (Local Clouds)					Thunderstorms (Kulog at Kidlat)							
El Nino/La Nina	Weak La Nina (2012)									Weak La Nina (2011)		

Revised EWS Communication Flow



Setting up and maintenance of EWS



Bula, Camarines Sur
Iriga City
Buhi, Camarines Sur
Tabaco, Albay
Polangui, Albay
Libon, Albay
Sto. Domingo, Albay
Batan Isla
Rapu-Rapu, Albay
Oas, Albay
Guinobatan, Albay
Legazpi City, Albay
Camalig, Albay
Guinobatan, Albay
Albay Gulf
Daraga, Albay
Ligao City
Jovellar
Sorsogon City
Sorsogon
Donsol, Sorsogon
Burias Island
Pilar, Sorsogon
Gubat, Sorsogon
Claveria, Masbate

Location 9 barangays where Automatic Raingauges set up.

Improvement/upgrading of automatic weather stations and rain gauge network to enhance localized forecast for risk management in agriculture sector

Localized Seasonal Forecasting Tools

3-MONTH SEASONAL CLIMATE OUTLOOK

Issued At: 28 October 2013

Valid Beginning: November 2013 to January 2014

WEATHER OUTLOOK

▪. **The recent La Niña-like conditions in the tropical Pacific is predicted to strengthen in the coming months and may continue until the winter (DJF season).** Other weather system that will affect the region: NE monsoon, ITCZ, Easterly wave, Ridge of HPA and TC

WEATHER FORECAST

- **Buhi, Guinobatan and Gubat will experience above their normal rainfall conditions .**
- **Winds coming from NE (Amihan) affecting mostly Ariman, Bagacay and Rizal in Gubat.**
- **Igbac, Sn Ramon and Sn Buena in Buhi loct'd West of Bicol and Masarawag, Mauraro and Minto in Guinobatan exprncd light to mod winds from Southwest**
- **Cooler than normal (25.8C) temperature in the Region**

MONTHLY WEATHER OUTLOOK

Issued At: 28 November 2013

Valid Beginning: December 01-31, 2013

WEATHER OUTLOOK

- 50% Weak La Nina Condition occurrence in the Bicol Region whole month of December 2011 .

WEATHER FORECAST

- Buhi, Guinobatan and Gubat will experience above their normal rainfall conditions .
- Winds coming from NE (Amihan) affecting mostly Ariman, Bagacay and Rizal in Gubat.
- While Igbac, Sn Ramon and Sn Buena in Buhi located West of Bicol and Masarawag, Mauraro and Minto in Guinobatan will exprience light to mod winds from the Southwest.
- Cooler than normal (25.8C) temperature in the Region

10 DAY FARM WEATHER FORECAST

ISSUED: 5 AM November 25 , 2013
VALID: 5 AM December 04, 2013

WEATHER SYSTEM: Fronts AFFECTING BICOL REGION

SOIL MOISTURE CONDITION: MOIST TO WET SOIL OVER BUHI, CAM SUR; GUINOBATAN, ALBAY AND GUBAT, SORSOGON.

FISHING ADVISORY: MODERATE TO ROUGH SEAS OVER NORTHERN AND EASTERN BICOL, WHILE THE REST HAS SLIGHT TO MODERATE SEAS.

FISHERMEN ARE ADVISED TO TAKE PRECAUTIONARY MEASURES AND TO BRING EMERGENCY GADGETS. CONTINUE TO MONITOR THE WEATHER UPDATES THRU RADIO AND TELEVISION.

FARM WEATHER FORECAST

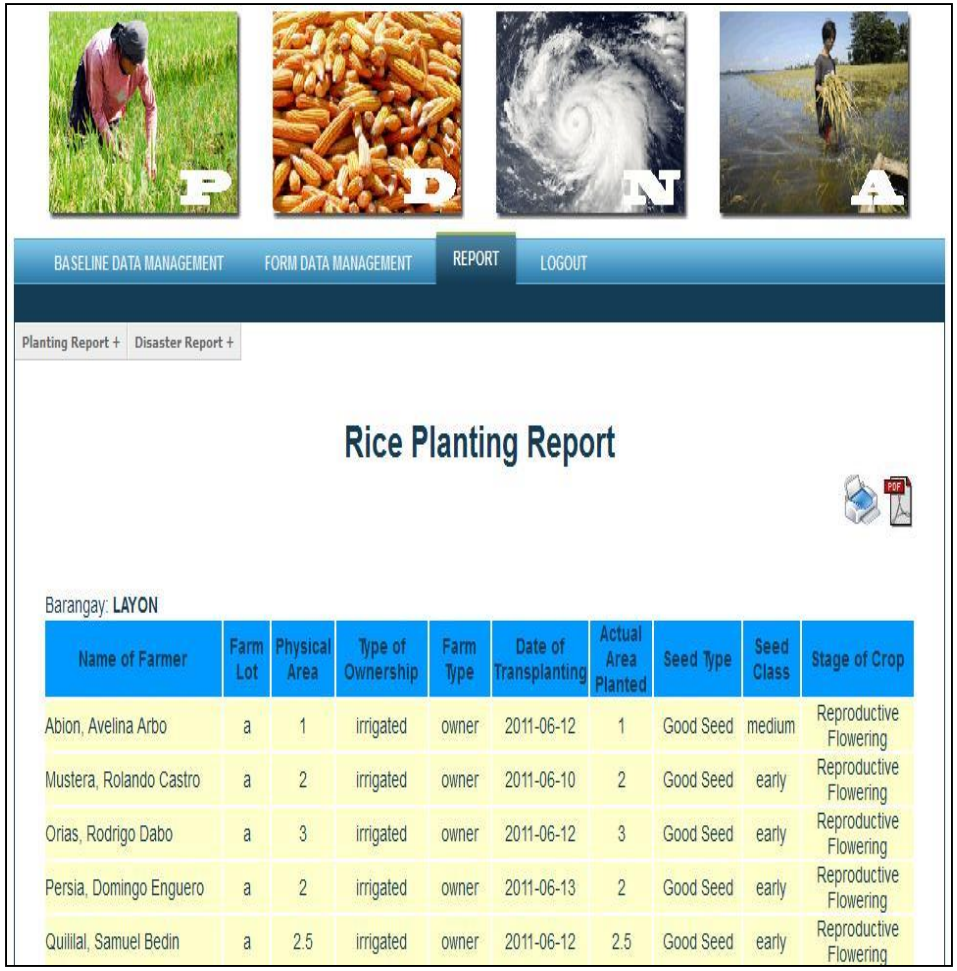
AGRI-WEATHER TIPS AND ADVISORIES:

- **CONTINUE NORMAL FARMING ACTIVITIES INCLUDING MONITORING OF INSECT PESTS AND HARMFUL ANIMALS**

- **BUILD FARM WATER RESERVOIR TO HARNESS RAINFALL DURING RAIN OCCURRENCES AND BE THE SOURCE OF WATER DURING THE ABSENCE OF RAIN**

Results, Activities & Partners

Result	Description	Activities	Lead Agencies
4	Improved ***PDNA methodology*** for agriculture, including ***web-based*** application ***software***	▫ Planning workshop for mainstreaming PDNA in agriculture ▫ Training on data collection and use of the improved PDNA methodology including software	▫ DA ▫ CBSUA



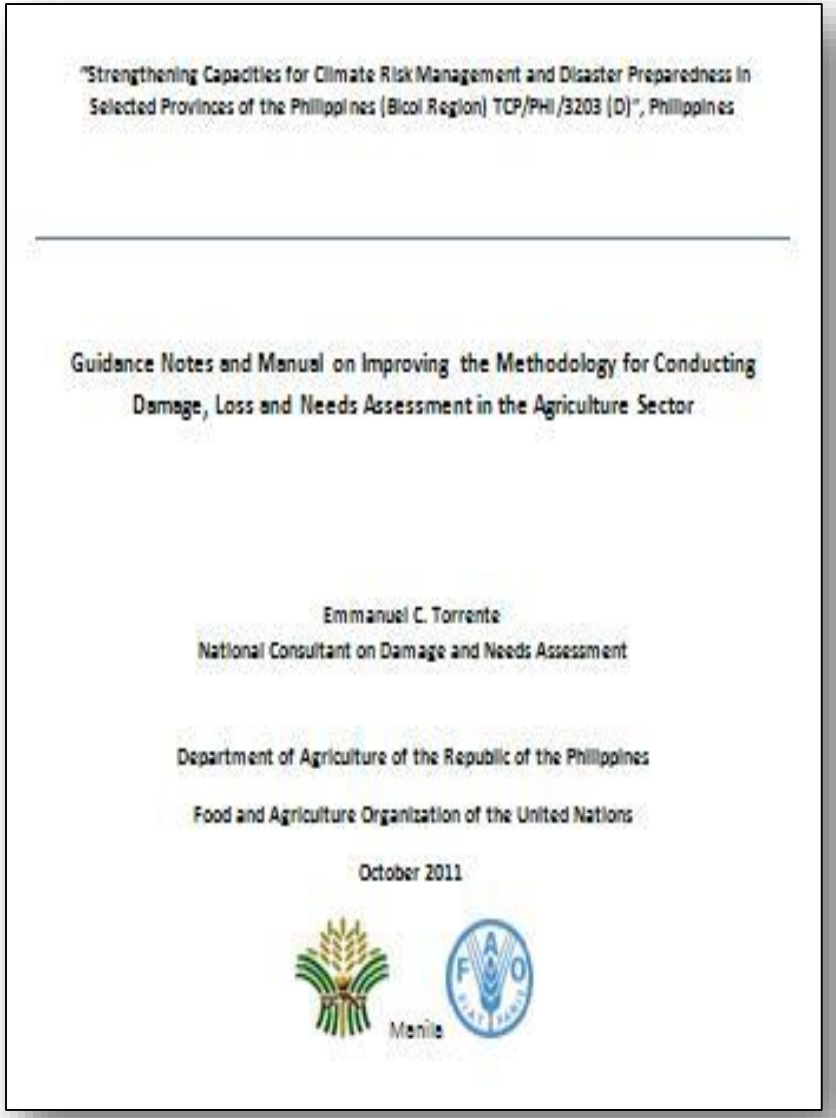
Improved Methodology for Damage and Needs Assessment in the Agriculture Sector

Objective

To “undertake timely and more accurate post-disaster damage assessment in the agriculture sector”.

Guidance Notes and Manual on Improving the Methodology for Damage, Loss and Needs Assessment in the Agriculture Sector

- Definitions of damages and losses are consistent with international concepts;
- Broader assessment coverage: Seasonal crops, Permanent crops, Livestock, Fisheries, Forestry, and Infrastructure;
- Templates for baseline information included expedite post-disaster damage/loss and needs assessment
- Data sets are similar or correspond with data regularly gathered by the DA



"Strengthening Capacities for Climate Risk Management and Disaster Preparedness in Selected Provinces of the Philippines (Bicol Region) TCP/PHI/3203 (D)", Philippines

Guidance Notes and Manual on Improving the Methodology for Conducting Damage, Loss and Needs Assessment in the Agriculture Sector

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Manila

A web-based PDNA software

- **Structures data collection, organizes and fast tracts data retrieval to generate assessment reports**

- Uploaded on web-based service platform, it links users (DA and LGUs) for real-time data encoding;
- Detailed database (Farmer/farm-level information);
- Design is open to cover wider data requirement of users (Dynamic system);
- Better data security. Only registered Agricultural Technician can LOG-IN, input real-time data and view draft reports.

Strategy and Processes

Damage assessment & Reporting System (D.A.)

PDNA Tool

Concept Development

Stakeholders Consultation

Site Validation

Provincial-level Consultation

(AT WS 1) Revisiting Existing forms for Agriculture Data collection

(AT WS 2) Orientation on PDNA Forms

Software Development Phase and Piloting (field data gathering)

Regional Presentation

National Presentation

User's Training/ System Deployment

Further enhancement

- **Pilot database build-up in 3-municipalities of Albay Province:**
  - Ligao City
  - Camalig
  - Oas

Data Sets

BASELINE INFORMATION

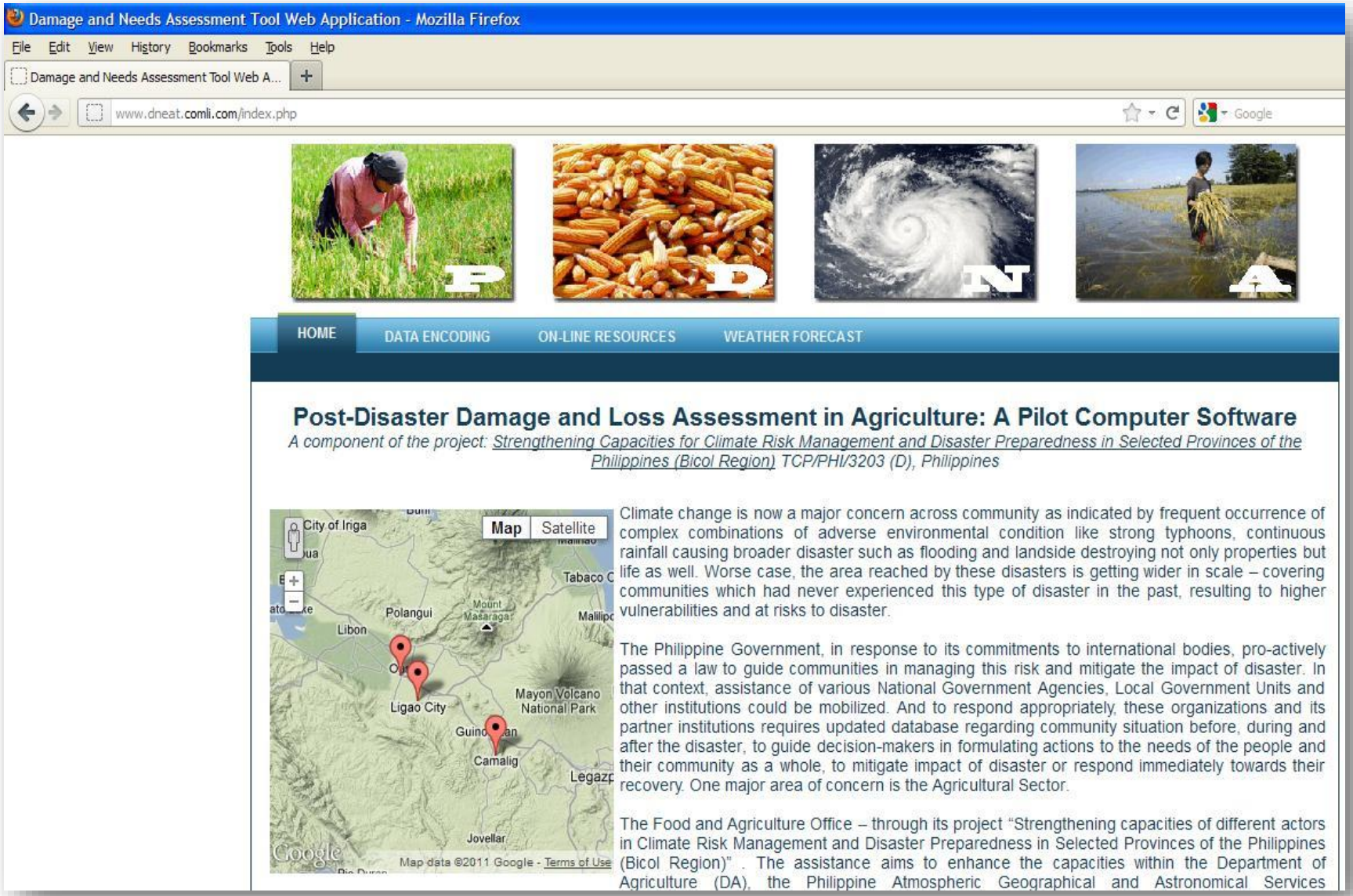
PLANTING UPDATES

ESTIMATION (Potential loss)

POST DISASTER (10 Days)

- Pre-disaster
- 24 hours
- 48 hours
- 72 hours

Salient Features: WebHOME Page



Salient Features:

- Database can be viewed in pre-defined reports, printed and saved in PDF format for easier submission;

Standing Rice Planting Report

Barangay Tuburan, Ligao, Albay

Name of Farmer	Farm Lot	Physical Area	Type of Ownership	Farm Type	Date of Transplanting	Actual Area Planted	Seed Type	Seed Class	Stage of Crop
Arnesto, Salvador	a	1	irrigated	owner	2011-06-12	1	Certified Seed	medium	Maturity
Belga, Herson	a	1	irrigated	leasehold	2011-06-12	1	Certified Seed	medium	Maturity
Cañon, Vicente	a	1	irrigated	owner	2011-06-12	1	Certified Seed	medium	Maturity
Del Valle, Jose	a	1.25	irrigated	owner	2011-06-13	1.25	Good Seed	medium	Reproductive Flowering
Garcia, Corazon	a	0.5	irrigated	owner	2011-06-13	0.5	Good Seed	medium	Reproductive Flowering
Hilario, Gene	a	1	irrigated	owner	2011-06-13	1	Certified Seed	medium	Maturity
Hilario, Severo	a	0.5	irrigated	owner	2011-06-12	0.5	Good Seed	early	Reproductive Flowering
Hilario, Tomas	a	1.3	irrigated	owner	2011-06-12	1.3	Good Seed	medium	Reproductive Flowering
Listangco, Crisanta	a	0.5	irrigated	owner	2011-06-13	0.5	Good Seed	early	Reproductive Flowering
Marmol, Edgar	a	1.87	irrigated	owner	2011-06-15	1.87	Good Seed	medium	Reproductive Flowering
Montañes, Roberto	a	1.5	irrigated	owner	2011-06-14	1.5	Good Seed	medium	Reproductive Flowering
Mustera, Antonia	a	1	irrigated	owner	2011-06-15	1	Certified Seed	medium	Maturity

FARMER'S PROFILE

Name	ABION, AVELINA ARBO
Gender	FEMALE
Household Size	2

LOT PROFILE

Farm Lot	Physical Area	Type of Ownership	Farm Type	Barangay	Crop Planted	Stage of Crop
a	1	owner	irrigated	Layon, Ligao	Rice	Reproductive Flowering

LOT DATA ENTRY

Farm Lot	Physical Area (Has)	Type of Ownership/ Operation	Farm Type	Average Yield (MT/Ha)					
				Dry Season			Wet Season		
				From	To	Value	From	To	Value
a	1	owner	irrigated	2010-09-16	2011-03-15	4.29	2011-03-16	2011-09-15	4.46

Add Entry | Clear Entry

24-HOUR DISASTER REPORT

Baseline Report for ***Tropical Storm Nanding***
Generated on *December 13, 2011*
Barangay-level Report

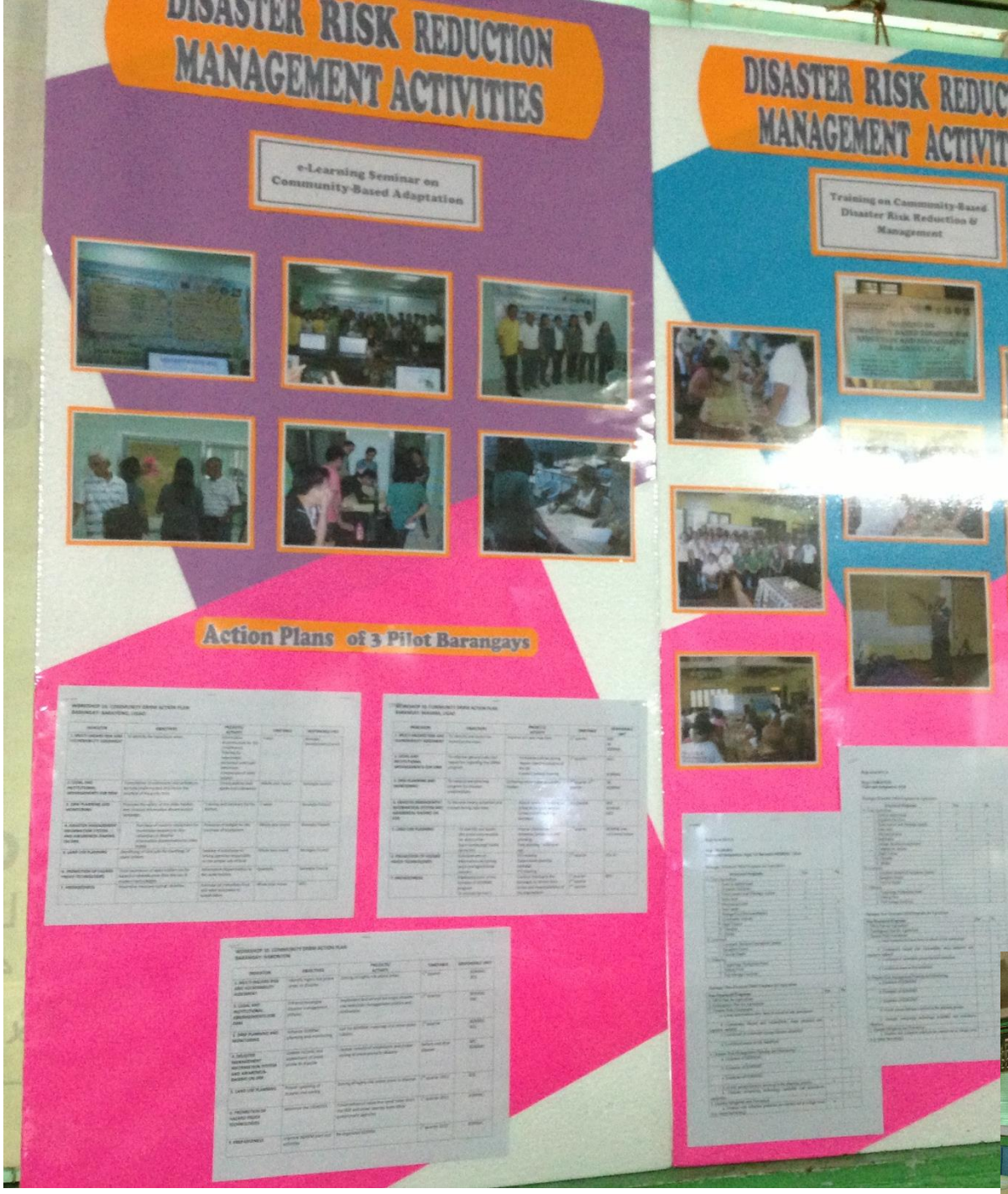
Agency: **Department of Agriculture**
Region: **V (Bicol)**
Province: **Albay**
Municipality/City: **Ligao**
Barangay: **Layon**
Crop: **Rice**

Farmers with Standing Crop	Growth Stage of the crop	Area Planted (Has)	Possible Affected Area per level of vulnerability			
			Low	Medium	Hign	Total
Abion, Avelina	Reproductive Flowering	1	0	0	1	**1**
Mustera, Rolando	Reproductive Flowering	2	0.09	0	0	**0.09**
Orias, Rodrigo	Reproductive Flowering	3	0	2.32	0	**2.32**
Persia, Domingo	Reproductive Flowering	2	0	0	0	**0**
Quililal, Samuel	Reproductive Flowering	2.5	0	0	0	**0**
Roaring, Renato	Reproductive Flowering	1	0	0	0	**0**
Sadia, Ireneo	Reproductive Flowering	1	0	0	0	**0**
Tolarba, Natividad	Reproductive Flowering	1	0	0	0	**0**

Next steps:

- Expansion of the system to include field data of important agricultural commodities to the software (Corn, HVCC, Livestock, Poultry, fisheries, forestry, infrastructure, etc.)
- Mainstreaming of the PDNA tool and software to the whole country;
- Integration of GIS Maps to visualize disaster vulnerabilities of agricultural areas;

Photo Documentation


DISASTER RISK REDUCTION MANAGEMENT ACTIVITIES
e-Learning Seminar on Community-Based Adaptation
DISASTER RISK REDUCTION MANAGEMENT ACTIVITIES
Training on Community-Based Disaster Risk Reduction & Management
Action Plans of 3 Pilot Barangays

SESSION HALL

Hon. SOL F. MATUGAS
Governor

PROVINCIAL PEACE A
SURIGAO DEL
REGULAR
GATEWAY HO

PROVINCIAL PEACE AND
SURIGAO DEL NO
REGULAR ME
GATEWAY HOTE

Thank you!