Harnessing Rural Radio for Climate Change Mitigation and Adaptation in the Philippines

Working Paper No. 275

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

Rex L. Navarro
Renz Louie V. Celeridad
Rogelio P. Matalang
Hector U. Tabbun
Leocadio S. Sebastian

Working Paper

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Contact:
CCAFS Program Management Unit, Wageningen University & Research, Lumen building, Droevendaalsesteeg 3a, 6708 PB Wageningen, the Netherlands. Email: ccafs@cgiar.org

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Abstract

Even at this Digital Age, the old-fashioned radio is still the most pervasive medium of mass communication, especially in the grassroots. Radio substantially contributes to behavior change by raising the level of awareness and understanding of rural people on burning issues like climate change. In the Philippines, there are about 659 radio stations, whose listenership is predominantly in the rural areas where more than two million farmers reside. Radio has advantages over the other mass media like television and newspapers in terms of being handy, portable and cheap. With the Internet, radio now has converged with television and has a global reach. Hence, aside from being effective information, education and entertainment medium, radio is a powerful vehicle for social mobilization towards climate change mitigation and adaptation in the grassroots.

Along with this, the CGIAR Research Program on Climate Change, Agriculture and Food Security in Southeast Asia (CCAFS SEA) partnered with the Philippine Federation of Rural Broadcasters (PFRB) in piloting a rural radio campaign dubbed as *'Climate Change i-Broadkas Mo'* in strategic regions of the Philippines in 2015 to 2016. The radio campaign provided PFRB affiliated broadcasters with scripts and ready-to-be-aired (RTBA) interviews on climate-smart agriculture. The scripts were meant to be read by participating rural broadcasters as a short material or segment within their program and used as filler or insert between segments and/or between musical pieces.

Taking off from the pilot campaign, the second phase of *Climate Change i-Brodkas Mo!* kicked off in mid – 2018 by PFRB in partnership with CCAFS SEA and DA Regional Field Offices (DA RFOs). The 2018 campaign is essentially an intensified follow up and expansion of the pilot campaign in 2015 to 2016 and will wind up towards the end of 2019.

The project trained 268 rural broadcasters and produced 276 ready-to-be-aired scripts, 285 canned interviews, 10 radio spots and two jingles in five different dialects in the Philippines. These were sent to more than 200 PFRB members and their network of community radio practitioners all over the Philippines with a combined listenership of two million. The materials are timeless, so these can be used continuously beyond the project. Aside from reaching a critical mass of farmers, the project enhanced the capacities of rural broadcasters on climate change reporting and created a demand for radio-based distance learning in Northern Philippines.

Keywords

Rural broadcasters; ready-to-be-aired interviews and scripts, radio-based distance learning; climate change mitigation and adaptation; climate-smart agriculture

About the authors

Rex L. Navarro is a Consultant of CCAFS SEA and formerly Director of Strategic Marketing and Communication at the International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, India. Contact: rex.navarro923@gmail.com.

Renz Louie V. Celeridad is a Communication Consultant of the CGIAR Research Program on Climate Change, Agriculture and Food Security in Southeast Asia (CCAFS SEA) and a Junior Communication Specialist at the World Agroforestry Philippines. Contact: R.Celeridad@cgiar.org.

Rogelio P. Matalang is Chair and President of the Philippine Federation of Rural Broadcasters and works for the Department of Agriculture Regional Field Office 02 as a broadcaster of DWDA 105.3 Mhz FM. Contact: rpmatalang@yahoo.com.

Hector U. Tabbun is the Chief of the Regional Agriculture and Fisheries Information Service of the Department of Agriculture Regional Office 02. Contact: hectabbun@gmail.com.

Leocadio S. Sebastian is the Regional Program Leader of CCAFS SEA. Contact: l.sebastian@irri.org.

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Contents

Acronyms

CCAFS SEA	CGIAR Research Program on Climate Change, Agriculture and Food Security in Southeast Asia
CSA	Climate-smart agriculture
DA-ATI	Department of Agriculture-Agricultural Training Institute
DA RFO	Dept. of Agriculture Regional Fief Office
DENR	Department of Environment and Natural Resources
ISU	Isabela State University
OPA	Office of the Provincial Agriculturist
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PAJ	Philippine Agricultural Journalists, Inc.
PIA	Philippine Information Agency
PFRB	Philippine Federation of Rural Broadcasters
PhilRice	Philippine Rice Research Institute
RAFID	Regional Agriculture and Fisheries Information Division
RTBA	Ready-to-be-aired
SOA	School-on-the-Air
SUCs	State Universities and Colleges
VSU	Visayas State University

Introduction

Even at this Digital Age, the old-fashioned radio is still the most pervasive medium of mass communication, especially in the grassroots. Radio substantially contributes to behaviour change by raising the level of awareness and understanding of rural people on burning issues like climate change.

There are approximately 659 radio stations in the Philippines, together reaching more than 97 percent of rural households. Radio has several advantages over other forms of mass media (television and newspapers). It is handy, portable and cheap. It is the most popular companion medium since it is easily accessible virtually anywhere.

Aside from being an effective information, education, and entertainment medium, radio is a powerful vehicle for social mobilization for climate change mitigation and adaptation.

Although climate change has become a buzzword in the Philippines, there is a real lack of science-based information available 'on the ground'. Through a rural radio campaign chronicled here, increased awareness and understanding can be achieved among a substantial number of rural broadcasters and a critical mass of farmers especially on the need to adapt to and mitigate climate change. This heightened awareness and understanding will cause farmers and communities to demand more information on climate change-related agricultural innovations from local, regional, national and international agencies.

In 2015, the CGIAR Research Program on Climate Change, Agriculture and Food Security in Southeast Asia (CCAFS – SEA) partnered with the Philippine Federation of Rural Broadcasters (PFRB) in piloting a radio campaign on climate change, agriculture and food security in strategic regions of the Philippines. Locally dubbed as *Climate Change i-Brodkas Mo!* this pilot radio campaign sought to mobilize a strategic section of the rural population to practice mitigation and adaptation measures at the individual and community level. It also sought to have a cascading effect on local leaders and policy makers to mainstream climate change in agriculture policies and programs.

Taking off from the pilot campaign, a second phase of *Climate Change i-Brodkas Mo!* kicked off in mid – 2018 by PFRB in partnership with CCAFS SEA and DA Regional Field Offices (DA RFOs). The 2018 campaign is essentially an intensified follow up and expansion of the pilot campaign in 2015 – 2016 and will wind up towards the end of 2019.

Objectives

The objectives of the project are as follows:

1. Conduct a series of seminar-workshops on climate change, agriculture and food security for rural broadcasters and get them engaged in the campaign.
2. Produce and distribute ready-to-be-aired broadcast materials, spots, and jingles in major Philippine dialects.
3. Heighten awareness and understanding and mobilize rural communities about climate change mitigation and adaptation in agriculture and food security.

Approach and Methodology

The following steps were pursued in implementing the project:

1. Organized a series of two-day seminar-workshops on climate change, agriculture and food security for rural broadcasters in Luzon, Visayas, and Mindanao to familiarize them on the issues and science of climate change and in promoting climate-smart agriculture.
2. Prepared short ready-to-be-aired (RTBA) scripts in five dialects supplied to participating rural broadcasters. Script length varied from two to four minutes, short enough to be easily read by rural broadcasters in their respective programs.
3. Prepared 5 – 10-minute canned interviews, 10 radio spots and two jingles in major dialects.
4. Sent the foregoing RTBA materials electronically on a weekly basis where possible. Hard copies (packaged in announcers' folders) were also prepared, printed and distributed to rural broadcasters and other interested media personnel.
5. Implemented an award/feedback system for broadcasters participating in the campaign. The awards were in the form of recognition plaques, certificates, medals and/or field trips. No prize money was given out.

Project Outputs

Seminar-Workshops for Rural Broadcasters

To kick off the campaign, a series of seminar-workshops to familiarize rural broadcasters on climate change, agriculture and food security were conducted by PFRB, DA and CCAFS SEA. These took place from October to November 2015 in Luzon (Muñoz, Nueva Ecija), Visayas (Kalibo, Aklan), and Mindanao (Koronadal City, South Cotabato).

Similar to Phase 1, the second phase of the campaign started with a series of broadcast consultation cum production workshops for Mindanao (Cagayan de Oro; 13-14 September 2018); Visayas (Baybay, Leyte; 27-28 September 2018) and Luzon (Echague, Isabela; 11-12 October 2018).

These workshops were attended by about 268 rural broadcasters (Table 01) for them to (1) appreciate and understand climate change, its meaning, including its concrete manifestations and science innovations for its mitigation and adaptation in the context of agriculture and food security; (2) produce prototype materials on climate-smart agriculture; and (3) discuss a workplan on the rural radio campaign. Pictorials and seminar-workshop details are in Appendix 01.

Resource persons discussed related issues on climate change and CSA. For instance, local meteorologists from the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) discussed the climate outlook in their areas. Likewise, local agriculture experts talked about climate-smart agriculture technologies and practices in their contexts. Invited farmers, meanwhile, provided testimonials about their CSA practices.

On the other hand, PFRB officials shared various techniques on how to broadcast climate change and CSA. They also assisted participants on how to identify specific topics for broadcasting. The workshops then served as a platform were broadcasters could apply the lessons that they learned from the discussions.

In the workshops, participants were divided into smaller groups to brainstorm topics for the prototype production. The group composition was diverse to ensure that ideas would come from various sectors. They were guided by the discussions of resource persons from the academe, local government units (LGUs), CCAFS SEA, and PFRB.

The small groups then recorded prototype RTBAs either through their phones or through radio stations. While playing the materials, they also flashed the scripts on screen. This enabled the PFRB, CCAFS SEA, and the rest of the participants to critique the materials and provide suggestions for improvement. After critiquing by resource persons, the prototypes were collected and improved by PFRB which were eventually turned into ready-to-be-aired materials.

Table 01. Summary of seminar-workshops on climate change conducted for rural broadcasters; 2015 and 2018 (CCAFS SEA and PFRB).

Date	Location	No. of Participants
Phase 1 (2015)		
05 – 06 October	Muñoz, Nueva Ecija	70
09 –10 November	Kalibo, Aklan	50
14 –15 December	Koronadal City, South Cotabato	60
Phase 2 (2018)		
13-14 September	Cagayan de Oro	32
27-28 September	Baybay, Leyte	36
11-12 October	Echague, Isabela	20
	Total	**268**

Ready-to-be-Aired Broadcast Materials

In Phase 1, the project produced 156 ready-to-be-aired (RTBA) interviews and 165 scripts (36 in Ilocano, 39 in Tagalog, 37 in Cebuano, 26 in Ilonggo, and 18 in Bicolano). In Phase 2, hereunder is the breakdown:

1. Thirty (30) ready-to-be-aired interviews (six – ten minutes each) in five dialects (i.e., Tagalog, Ilocano, Waray, Cebuano and Maguindanao) covering a wider range of commodities (e.g., livestock and fisheries) under climate smart agriculture. These interviews were done with various subject matter specialists on climate change, CSA and related topics.
2. Thirty (30) scripts in five dialects (i.e., Tagalog, Ilocano, Waray, Cebuano and Maguindanao based on the interviews in #1.
3. Ten (10) dramatized radio spots in Tagalog on the same subject matter as in #1.
4. Two (2) musical jingles (Tagalog and Ilocano) that carry the central message of climate change resilience and readiness.

On the whole, 276 ready-to-be-aired interviews, 285 scripts, 10 radio spots and two jingles were produced by the project in five major dialects in the Philippines (Table 02). These were sent to 152 PFRB members (Appendix Table 03) and their network of community radio practitioners all over the Philippines with a combined listenership of two million.

The materials consisted mostly of climate-smart agriculture subjects with a strong focus on basic concept of climate change and CSA techniques in rice and vegetable farming, agroforestry, general farming technologies, livestock production, fisheries, fossil fuel-saving technologies and post-harvest production technologies. The list of topics covered is in Appendix 02.

Table 02. Summary of broadcast materials produced in Phase 1 and Phase 2.

Dialect	Canned Interviews	Scripts		
Phase 1				
Ilocano	36	36		
Tagalog	39	39		
Cebuano	37	36		
Ilonggo	26	41		
Bicolano	18	-		
Sub- total	156	165		
Phase 2				
Dialect	**Canned Interviews**	**Scripts**	**Radio Spots**	**Jingle**
Ilocano	30	30		1
Tagalog	30	30	10	1
Waray	30	30		
Cebuano	15	15		
Maguindanao	15	15		
Sub- Total	**120**	**120**	**10**	**2**
Grand Total	**276**	**285**	**10**	**2**

The RTBA interviews, scripts, plugs and detailed documentation of the broadcast seminar-workshops can be accessed at:
https://drive.google.com/drive/folders/1UlIVIu1OdFR0GFW2ultw51xS60cvSFD5?usp=sharing

Veteran officers and members of PFRB spearheaded the production of the RTBA materials and scripts: The late PFRB Chair Louie Tabing (Tagalog); PFRB President based in Tuguegarao Rogie Matalang (Ilocano); PFRB Vice Pres. for Visayas Chito Morante (Waray); PFRB member in Iloilo Juvy Gaton (Ilonggo); PFRB member in Legaspi Rose Olarte-Orbita (Bicolano) and PFRB Vice Pres. For Mindanao Chris Llanos (Cebuano and Maguindanao).

Utilization

The RTBA materials were read by participating rural broadcasters as short segments within their programs. The materials were also used as filler or as inserts between segments and/or between musical pieces. Each script was written in flowing easy-to-read and easy-to-understand language. The pieces were purposefully short so as not to be intrusive in the announcer's program and not to disrupt flow of discussion.

All scripts were packaged in an announcer's folder together. As a matter of practice, the scripts and canned interviews were aired repeatedly in every program of PFRB members. For DZMM *TeleRadyo* (radio/TV) and a couple of other TV shows by PFRB members, the interviews were fitted with pictures and videos. All the Tagalog interviews were featured as articles in *Kaunlaran* magazine.

Most PFRB broadcasters are also members of the Philippine Agricultural Journalists, Inc. (PAJ) and the Philippine Science Journalists, Inc., hence, these organizations worked closely in the campaign through joint participation in the broadcast seminar-workshops.

Rewards and incentives

For both Phases, below is the reward and incentive scheme:

1. Instead of airtime fee, incentives were given to participating broadcasters on the basis of feedback returns, reports, and initiatives to localize and expand discussion, as well as monitoring reports; Certificates were also given.
2. Twenty (20) plaques of appreciation to outstanding participants.
3. Five (5) trophies (plaques) to most deserving participants.
4. Field trip to climate smart projects and communities for selected participants.
5. Special prizes to members who have conducted school-on-the-air out of the RTBA materials.
6. Incentives to feed backing listeners in terms of field trip.
7. Radio receiver sets, mobile phones and other rewards were given to participating broadcasters.

Discussion

Insights on the broadcast seminar-workshops

1. *On the whole, the seminar-workshops enhanced the knowledge and understanding of rural broadcasters in reporting on climate change and CSA. Participants expressed their appreciation to the climate-related discussions as they gave them the confidence to broadcast scientific knowledge. Moreover, their skills as mass media practitioners were further improved as they learned new broadcasting techniques in the context of climate change, agriculture and food security.*
2. *Rural broadcasters were also able to connect and network with other relevant stakeholders such as those from the academe, local government units, research organizations, and international partners. Their linkage with these stakeholders is crucial to boost their credibility and increase their influence over their listeners. On the other hand, the aforementioned stakeholders were linked with partners (i.e., the broadcasters) that could multiply their reach in the grassroots.*
3. *The production workshops further illustrated the role of rural radio as a catalyst for climate actions. Compared to the butterfly model shown during the workshop synthesis, rural radio connects all stakeholders with elements of climate mitigation and adaptation.*

Communication and collaboration catalyzed by rural radio can mobilize stakeholders to take action, especially in the grassroots.

The strength of ready-to-be aired broadcast materials

The production of short RTBA materials and one-page scripts significantly enhanced the efficiency and effectivity of broadcasters for the following reasons:

1. *Ease of use* - rural broadcasters lack time and resources to prepare interviews with subject matter experts who are mostly based in urban centers and far away research institutions.
2. *Credibility* - Since interview materials are from experts themselves, there is no question about validity and accuracy of information.
3. *Cost efficiency*- the RTBAs can easily be accommodated as a regular segment in running a popular show; hence, airing of these materials need not be negotiated with managers of commercial stations who demand high commercial fees.

Major lessons learned

1. *The project complemented and supplemented extension workers* who were not be able to reach distant places. In the absence of extension workers, vital information on climate change and CSA were passed on by rural broadcasters to farmers in far flung areas through the RTBA interviews with subject matter specialists and scripts aired by broadcasters.

2. *The project linked rural people with other stakeholders* to be involved in the development process by providing opportunities for interaction among farmer-listeners and other stakeholders (e.g. extension workers and researchers) though the rural broadcasters. Rural radio enables communities to articulate their experiences and critically examine issues and concerns affecting their livelihood. These issues and concerns can be discussed through radio and immediate feedback can be obtained for relevant authorities to take action.

3. *The project demystified the jargon of climate science by using a language that ordinary people can understand*. Broadcasts were targeted to specific communities using language and content of the RTBA materials were localized. Since radio transcends literacy barriers, broadcast messages were understood even by unschooled listeners.

Emerging Outcomes

Enhanced capacity of rural broadcasters

In the context of agriculture and food security, science-based innovations on climate change are available, but these are not widely accessed by farmers and the public due to inadequate coverage on the subject by the mainstream media. Rural broadcasters are therefore the critical links of science-based innovations on climate change with the grassroots. The public relies mainly on the media to guide them in their daily actions through accurate information and knowledge. Hence, broadcasters should be equipped with a deeper understanding and appreciation on what is climate change, its processes and scientific terminologies. This way, their competencies in climate change reporting are significantly boosted. By training and engaging rural broadcasters, CCAFS SEA and partners are handily linked with next users and end-users. *Hence, one of the most significant outcomes of this project is linking science with the grassroots action through rural broadcasters*.

Reached a critical mass of farmers

The impact of climate change innovations needs a critical mass for their widescale application on the ground. In this regard, the campaign was able to reach a critical mass of end users in the grassroots with the broadcast materials being aired on at least 63 radio stations nationwide. National and powerful stations were (and are still) among the outlets where the materials were aired - DZMM TeleRadyo, Radio ng Bayan, and DXAS, for example. Each of these stations have about 50,000 – 700,000 listeners a day. Regional and community stations also participated. This is important since the focus of rural broadcasters is remote farming communities. If we compute an average of 20,000 listeners for the rest of the stations where the CCAFS-PFRB materials were aired, we would have reached at least 2,000,000 listeners.

Created demand for radio-based distance learning on CSA

As an offshoot of the pilot radio campaign, a radio-based distance learning project has been initiated by the Philippine Department of Agriculture Regional Office 2 with CCAFS-SEA and a consortium of 20 organizations in Cagayan Valley. Dubbed "*Kaalamang Pagsasaka sa Himpapawid*" the project showcased the power of radio in sharing improved agriculture and fisheries technologies with a critical mass of farmers and fisherfolk. This project graduated about 6,000 of the 10,078 farmers who enrolled. The report on the first phase of this School-on-the-Air project on CSA can be accessed at:

https://ccafs.cgiar.org/publications/reaching-unreached-school-air-climate-smart-agriculture-soa-csa-cagayan-valley#.XPzGwvYSt1s

The project has indeed created a demand for radio-based distance learning (aka School-on-the-Air) initially in Northern Philippines. Thus, a second phase is being organized for launching in September 2019. This phase aims to reach 10,000 farmers in Cagayan Valley. During the seminar-workshops for rural broadcasters in Phase 2, discussions were held to outscale the School-on-the-Air project in other regions of the Philippines.

Next Steps

This project has demonstrated a cost-effective method of reaching a critical mass of next users and end users in sharing innovations on climate change and CSA. After the end of Phase 2, an action research will be proposed to assess the evidences of the outcome initial impacts of the project. This will have a similar methodology with the proposed study in assessing the outcomes of the School-on-the-Air (SOA) project on CSA. All RTBA materials produced in the two phases will be used in the upcoming second phase of the SOA project.

Appendix 01

Photographs of Broadcast Seminar-Workshops

Phase 1

Munoz, Nueva Ecija; 05-06 October 2015

Kalibo, Aklan; 09-10 November 2015

Koronadal, South Cotabato; 14-15 December 2015

Phase 2

Cagayan de Oro; 13-14 September 2018

Baybay, Leyte; 27-28 September 2018

Echague, Isabela; 11-12 October 2018

Sample seminar- workshop activity plan in Phase 1 (Muñoz, Nueva Ecija)

DAY 00		
Time	**Activity**	**In-Charge**
16:00 – 19:00	Registration/check-in of Participants	PFRB Staff
19:00 – 22:00	Dinner/fellowship/introduction of Participants	Participants
DAY 01		
Opening Program **Emcee**: PFRB Host		
08:00 – 09:00	Opening Remarks	Dr. Calixto Protacio Executive Director of PhilRice Dr. Rex Navarro CCAFS Consultant Dr. Candida B. Adalla, Former UP-CA dean & DZMM radio volunteer Louie Tabing *(Chair, PFRB)*
	Workshop Overview	Rex Navarro (*CCAFS-SEA Consultant)*
Session 01: Understanding Climate Change Agriculture & Food Security **Moderator**: Rex Navarro **Documentors**: Ryan Angelo Celis (Communication Specialist, CCAFS-SEA) / PFRB staff		
09:00 – 09:30	Climate Change , Agriculture & Food Security: Challenges in the Philippines	Leo Sebastian (presented by Dr. Rex Navarro)
09:30 – 10:00	Climate Change Impacts in the Region	Andrew Villacorta DA RED (presented by Felicito Espiritu, Jr.,Info Officer)
10:00 – 10:30	**Coffee Break**	
10:30 – 11:00	Climate Smart Agriculture: Concepts and practices	Ricardo Orge *(Program Leader,* *Climate Change Program, PhilRice)*
11:00 – 11:30	Climate Change: A Farmers' Perspective	Mr. Romeo Vasquez Farmer leader, San Mateo, Isabela
11:30 – 12:00	**Open Forum**	
12:00 – 13:00	**Lunch Break**	
Session 02: Radio Broadcasting for Climate Change Mitigation & Adaptation **Moderator**: Rogelio Matalang (President, PFRB) **Documentors**: Ryan Angelo Celis / PFRB staff		
13:00 – 13:30	PFRB – CCAFS-SEA Pilot Radio	Louie Tabing

	Campaign on CC Mitigation & Adaptation	
13:30 – 14:00	Communicating Climate Change: Opportunities & Challenges for Broadcasters	Rex Navarro
14:00 – 14:30	Radio Broadcasting for Climate Change & Agriculture	Louie Tabing
14:30 – 15:00	**Open Forum**	
15:00 – 15:30	**Coffee Break**	
Workshop 01: Identifying Topics in Broadcasting Climate Change and Agriculture **Facilitator**: Louie Tabing/PFRB Staff **Documentors**: Ryan Angelo Celis / PFRB staff		
15:30 – 17:30	Workshop mechanics	Louie Tabing
	Group Workshop (4 workshop groups)	Workshop Groups
	Presentation of outputs by group*	Group Leader
19:00 – 21:00	**Dinner/Fellowship**	

DAY 02		
Workshop 02: Writing Scripts in Broadcasting Climate Change and Agriculture **Facilitator**: Louie Tabing/PFRB Staff **Documentors**: Ryan Angelo Celis / PFRB staff		
08:00 – 12:00	Workshop mechanics	Louie Tabing
	Group Workshop (4 workshop groups)	Workshop Groups
12:00 – 13:00	**Lunch Break**	
13:00 – 15:00	Continuation of workshop	Workshop Groups
15:00 – 15:30	**Coffee Break**	
15:30 – 16:30	Presentation of outputs by group*	Group Leader
	Judging /Critiquing	Dr. Rex Navarro, Dr. Frisco Malabanan, Dr. Karren Barroga
Synthesis & Closing Program **Emcee**: Rogelio Matalang **Documentors**: Ryan Angelo Celis / PFRB staff		
16:30 – 17:00	Synthesis	Rex Navarro
	Workplan for the pilot radio campaign	Louie Tabing
	Closing Remarks	Workshop Host

Sample seminar- workshop activity plan in Phase 2 (Cagayan de Oro)

DAY 00		
Time	Activity	In-Charge
0400-0700	Registration/Check-in of Participants	PFRB
0700-1000	Dinner/Introduction of Participants	
DAY 01		
Opening Program Emcee: Crismon Llanos (PFRB VP-Mindanao) Rapporteur: Renz Louie Celeridad (Communication Consultant, CCAFS SEA)		
0830-0930	Welcome Address	Maria Eloisa Akut, Information Officer, DA-ATI Region X
	Opening Remarks	Dr. Rogelio Matalang, President, PFRB
	Workshop Overview	Dr. Rex Navarro, Consultant, CCAFS SEA; Adviser, PFRB
Plenary Session: Understanding Climate Change, Agriculture and Food Security Moderator: Rogelio Matalang Rapporteur: Renz Louie Celeridad		
0930-1000	Climate Change, Agriculture and Food Security: Challenges and Opportunities for Philippine Broadcasters	Dr. Rex Navarro
1000-1030	Coffee Break	
1030-1130	Climate-smart Agriculture Technologies and Practices	Dr. Eduardo Mangaoang, Director, Regional Climate Change Research and Development Center, Visayas State University
1130-1200	Open Forum	
1200-1300	Lunch Break	
Panel Discussion: Climate Change Mitigation and Adaptation Practices in Agriculture Moderator: Rex Navarro Rapporteur: Renz Louie Celeridad		
1300-1500	Farmers' Perspectives	Invited Resource Persons
1500-1530	Coffee Break	
Workshop 01: Identifying Topics in Broadcasting Climate-smart Agriculture Facilitator: Rogelio Matalang Rapporteur: Renz Louie Celeridad		
1530-1730	Group Workshop	Workshop Groups
	Presentation of Ideas by Group	Panel: Rogelio Matalang, Rex Navarro, Chito Morante

DAY 02		
Workshop 02: Producing RTBA Prototypes for Climate-smart Agriculture Facilitator: Chito Morante Rapporteur: Renz Louie Celeridad		
0800-0830	Additional Pointers in Radio Production	Rogelio Matalang
0830-1200	Continuation of Broadcast Production	Workshop Groups
1200-1230	Lunch Break	
1230-1430	Finishing Touches of Broadcast Production	
1430-1530	Presentation and Critiquing of Group Outputs *(Scripts will be presented on the screen as programs are played)*	Panel: Rogelio Matalang, Rex Navarro, Chito Morante
1530-1600	Coffee Break	
1600-1630	Workplan for the PFRB Phase 2 Campaign	Rogelio Matalang
1630-1700	Synthesis and Closing Program	Malou Angolluan and Cheche Masicat

Appendix 02. Topics for RTBA materials produced.

I. Basic concepts related to climate change & c-smart agriculture

1. What is climate change?
2. Coping with Climate Change
3. Greenhouse gases and global warming
4. Impact of climate change lives of people communities.
5. Impact of climate change on fisheries
6. Impact of climate change on animals and livestock
7. Impact of climate change on agriculture, fishing, animal husbandry?
8. What is climate smart agriculture?
9. Examples of climate smart agriculture
10. El Nino and La Nina phenomena
11. Risk Transfer Adaptation and Insurance
12. Climate Smart Technologies
13. Effect of Climate Change
14. Managing ang Controling Pest

II. Climate smart technologies in rice production

15. Drought resistant rice varieties
16. Flood resistant rice varieties
17. Direct Seeding
18. Salt tolerant rice varieties
19. Rice Farming Technologies
20. Alternate wetting and drying
21. Sprinkler Irrigation
22. Observation well
23. Synchronous planting
24. SALT 1.Sloping agricultural land technologies
25. Small water Impounding pond
26. Short maturing varieties of rice
27. System of rice intensification (SRI)
28. Controlled Irrigation
29. Drought-Tolerant Varieties
30. Vermicompost and Vermicast

III. Setting up climate smart community

31. Climate smart community
32. Climate field school
33. Dumangas Model

IV. Agro forestry

34. SALT 1. The use of A frame
    SALT 2. Terracing contour farming
35. Protection of mangroves
36. Mangrove reforestation
37. Participatory forest management
38. Agro forestry and tree planting
39. Watershed management

V. General farming technologies

36. Ecological Engineering of Pest Management
40. Diversified farming
41. Integrated pest management
42. Insect and pest resistant varieties
43. Integrated weed management
44. Integrated nutrient management
45. Reduced tillage and zero tillage
46. Water conservation measures
47. Rain water harvesting 1
48. Rain water harvesting 2
49. Multi-story cropping
50. Crop rotation
51. Intercropping system
52. Green manuring
53. Nitrogen fixation
54. Improved postharvest technologies
55. Usefulness of legumes
56. Mulching
57. Environment protection
58. Use of effective microorganism
59. Use of indigenous microorganism
60. Fermented plant juice
61. Vermiculture /vermicomposting

62. Multiple root stock system
63. Bio-Intensive Gardening (BIG)
64. Green house technology
65. Participatory varietal selection

VI. Fossil fuel saving technologies

66. Non fossil fuel technologies – ram pump, wind mill, solar panel.
67. Organic farming
68. Biogas system
69. Solar power in agriculture

VII. Post-harvest and marketing technologies

70. Improving the marketing system
71. Farm mechanization
72. Proper harvest storage systems
73. Value adding/value chain
74. Crop insurance (so farmers can invest in better new technologies)

Appendix 03. List of recipients of RTBA broadcast materials.

NO	LAST NAME	FIRST NAME	ADDRESS	RADIO STATION
1	Abella	Mildred	San Gabriel, Tuguegarao City	Radyo ng Bayan
2	Abella Jr.	Efren	LGU Bldg., Training Center, Centro East, Sta Teresita, Cagayan	DWTS
3	Abuan	Milagros	#249 Pagdalagan Norte, City of San Fernando La Unions	DZNL
4	Agustin	Eva	DA RFO 01 Aguila Rd., Sevilla, San Fernando City, La Union	DZNL
5	Asis	Marshall Louie	One Corporate Center, Ortigas Center	DZAS
6	Ayson	Jovita	BFAR 2, Tuguegarao City, Cagayan	Radyo ng Bayan
7	Balubal	Judith	E-life Digital Zone Eton CyberpodOrtigas Ave., cor., Edsa Quezon City 1110 Manila	CSU-On the Air
8	Bermudez	Nathaniel	1895 CBY Barrades II, tala, Caloocan City	KISS FM
9	Baylon	Jestony	NVSU, Don Mariano Perez, Bayombong Nueva Vizcaya	NVSU-96.5 UFM
10	Bulanhagui	Patria	RMIC Bldg., BPI Cmpd. Visayas Avenue Diliman, Quezon City	95.1 Kiss Fm
11	Cajilig	Armaldo	Radio Vatan, Balanga, Bataan	87.5 FM Radio Vatan
12	Camit	Bernaldo	Office of the Provincial Agriculturist, Provincial Capitol Compound, Tuguegarao City	DWPE
13	Carbonel	Ramil	PHILSCAT, CLSU Cmpd.,Science City of Muñoz, Nueva Ecija	Radyo CLSU
14	Carriedo	Vanessa	DWRE 107. 9 Isabela State University, Echague, Isabela	DWRE
15	Cauilan	Ana Marie	MassCom Department, Cagayan State University, CarigTuguegarao City	DWPE
16	Dadivas	Ann	DWRA 2nd Floor. CDCAS Bldg., Garita Heights, Cabagan Isabela	DWRA
17	David	Patrick Ian	DWRL 95.1 FM LGU Cmpd., Centro Lal-lo, Cagayan	DWRL

18	David	Nathalie	Unit 808, 8th flr., Atlanta Centre Condominiu, Annapolis St., Greenhills, San Juan City	DWWW
19	De Guzman	Vivian	DWPE- Radyo ng Bayan, Nursery Cmpound, Tuguegarao City	DWPE
20	Delos Trinos	Cecilia	Nueva Vizcaya State University, Bayombong, Nueva Vizcaya	96.5 UFM NVSU
21	Enriquez	John	One Corporate Center, J. Vargas Corn., MeralcoAve.,Ortigas	DZAS
22	Espiritu Jr.,	Felicito	Department of Agriculture , Regional Field Office No.3 Capitol Cmpd., City of San Fernando, Pampanga	DWGV
23	Fugaban	Domingo	DZYT Brgy. 10nTuguegarao City	DYZT
24	Gumiran	Imee	Garita heights, Cabagan, Isabela	DWRA
25	Jimenez	Catherine	DA RFO 02, Diversion Rd., San Gabriel, Tuguegarao City	DA-RFO 02 / DWDA
26	Lacanlalay	Danilo	DZYT Bldg. Arellano St., Barangay 10, Tuguegarao City, Cagayan	DYZT
27	Lazafi	Ramon Efren	199 M.H. Del Pilar St., Sulucan, BocaueBulacan.	RadyoBulacan
28	Licas	Purita	Philippine Information Agency, region 2 - Old DPWH Bldg., Bagay Road, Tuguegarao City	Radyo Maria 101.5 FM
29	Manuel	Ryan	Nueva Viscaya State University 37000 Bayombong Nueva Vizcaya	DWNS 96.5 UFM
30	Matalang	Rogelio	DWDA FM San Gabriel, Tuguegarao City	DWPE,DWDA
31	Ocampo	Ozanne	Department of Agriculture Regional Field Office 03, Capitol Cmpd., City of San Fernando, Pampanga	DWRW
32	Osalla	Maria Teresita	RadyoDZLB,College of DevCom, UPLB, Los Baños, Laguna	DZLB
33	Osingat	Susan	Nueva Vizcaya State University, Bayombong, Nueva Vizcaya	DWNS
34	Parong	Gloria	DZNL, San Fernando City, La Union	DZNL
35	Pascual	Arlene	College of Engineering and Architecture, BPSU Main Campus	DZDY
36	Pascual	Dickstein	Department of Agriculture Regional ficce no. 02, Tuguegarao City	DA-RFO 02

37	Paz	Edgar	Tuguegarao City, Cagayan	DWPE
38	Peralta	Juana	DZNL, San Fernando City, La Union	DZNL
39	Rodillas	Diego	Governor's Mansion Cmpd.,Brgy. 8 Lucena City	DWLC
40	Roxas	Elizabeth	AMARC/EBC 30 Sandoval Ave. Pinagbuhatan, Pasig City	AMARC/EBC
41	Sagabaen	Mary Ann	Nursery Compound, Bagay Rd., Tuguegarao City	PBS-DWPE
42	Sajorda	Marion Edward	Roxas Blvd., Manila	DWBL
43	San Luis	Rita	DWGV- Angeles,Pampanga	DWGV
44	Sonico	Rodrigo	DA- RFO 2, Nursery Cmpound, BagayRd.,San Gabriel, Tuguegarao City	DWPE/DWSI/DWDY
45	Tamayo	Rogelio	CSU Lal-lo Campus, Sta. Maria Lal-lo, Cagayan	DWRL
46	Tuddao	Cayetano	Maribbay St., Ugac Norte, Tuguegarao City	DZCV
47	Villanueva	Maria Theresa	Agricultural Training Institute Region III, San Ramon, Dinalupihan, Bataan	DWRW
48	Ilan	Ma. Bella	Depatment of Agriculture RFO-5 San Agustin, Pili, Camarines Sur 4418	DZOK
49	Naing	Alvin	MDRRMO Daet, municipal Cmpd, DaetCamarines Norte	DZMD
50	Nustral	Rosalila	Municipal Agriculture Office, San Jose Occidental Mindoro	RadyoNatin
51	Lotivo	Eleanor	DA-PAES, Sta. Monica, Puerto Prinsesa City	DYPR
52	Nidea	Jennis	PNB Bldg.,Generalluna St., Naga City	GNNTV
53	Parfan	Alex	711am RadyoAgila, San Agustin, Canaman, Camarines Sur	PBC-DZLW
54	Teologo	Eunice	Department of Agriculture Palawan Research Experiment Station (DA-PRES) Brgy. Sta Monica Puerto Princesa City, Palawan 5300	DWIZ
55	Abdullah	Kadiguia	DA-ARMM, ORG Complex, Cotabato City	DXMS

56	Abdullah	Bai Sitte	DAF-ARMM, Org Compound, Cotabato City	DXMS
57	Abdullah	Salembai	Department of Agriculture Maguindanao, 2nd Flr. MGB Bldg.,Sinsuat Ave., Cotabato City	DXMS
58	Abunda	Ruth	DYES Radyo ng Bayan, Borongan City, E. Samar	DYES
59	Aguillon	Carl Ulysses	DA RFO-12, Brgy. Carpenter Hill, Koronadal City, South Cotabato	DXCP
60	Alicante	Mary Jane	Municipal Agriculture Office, LGU Cataingan, Masbate	DZNT
61	Anadia	Darwin	City Agriculture Department, 2nd Floor, Yutivo Bldg. Cebu City Hall	DYHP
62	Anso	Alih	Office of the Mayor, UPI Maguindanao	DXUP Radyo ng Bayan
63	Apego	Ma. Lourdes	#10 Pizzaro St., Butuan City	DXBN
64	Aquino	Rebecca	B9 L5 Capitol Village,Brgy. 9 Malaybalay City, Bukidnon	DXIQ
65	Arais	Aurelius	DXMK FM Ddv Bldg, J.C Aquino Ave. Butuan City	DXMK / DA RFO - 13
66	Aras	Bahaya	Department of Agriculture TubigBoh, BongaoTawi-Tawi	DXNN
67	Arbas	Charles	City Agriculture Office, City Hall Complex, Gatas District, Pagadian City	DXBC
68	Arquio Jr.	Antonio	RAFID Office DA-XI, Bangoy St., Davao City	Agri-Pinoy
69	Bacuyag	Jimmy	Centro Lal-lo, Cagayan	
70	Baliguat	Nicanor	Department of Agriculture Region IX, F. Bangoy ST., Davao City	DXRD
71	Balungcas	Edelyn	Margos, Kapatagan, Lanao del Norte	RN-Lanao
72	Balungcas	Roel	Digson, Bonifacio, Misamis Occidental	DXRN
73	Barimbao	Anna Delza	MES Complex, Maguikay, Mandaue City Cebu	DYAB
74	Basadre	Criste	Sucgang Ave., Ipil. Zamboanga, Sibugay	DXUZ

75	Basilio	Jesus	City Agriculture Office, Tumaga, Zamboanga City	DXRZ-RMN
76	Belizar	Ma. Daisy Amor	Campesao, Borongan City, Eastern Samar	DYES
77	Benabaye	Armando	Malaybalay City Bukidnon	DXIQ
78	Briones	Roberto	Department of Education/ Pandan Antique	DYNC
79	Buyser	Ramon	SJC Extension, Mambajao, Maasin, Leyte	CMN DYDM
80	Cabahug	Gideon	Central Mindanao University,Musuan, Bukidnon	DXMU
81	Caholes	Jojo	DXCN Sibagat	DXCN
82	Celendron	Wenceslao	DVMR Cebu Technological University	DVMR
83	Calesterio	Ruby	DA RFU-8, Kanhuran Hill, Tacloban City	DYDW
84	Calvo	Ma. Jesmer	Dugenio St., Gingoog City, Misamis Oriental	DXRG
85	Canoy	Renato	Sto. Niño,Lapasan, Cagayan de Oro City	DXCO
86	Cañete	Gloria	CTU Campus, Palms St., Cebu City	DYMR
87	Cempron	Cleto	GSIS Doongan, Butuan City	DXBN
88	De Leon	Cecilio	City Hall, Calbayog City	DYOG
89	Colasito	Maria Christina	DYDW, Brgy. Burayan, San Jose, Tacloban City	DYDW
90	Cuales	Rufina	PK6 South Poblacion,MaramagBukidnon	RadyoNatin
91	Daiz	Ma Teresita	Office of the Provincial Agriculturist,Catbalogan City, Samar	DVMS
92	Dela Peña	Era	Uhan, 2nd Floor CMC Bldg., LGU CataingancCmpd., Poblacion, Cataingan Masbate	DZNT
93	Duhaylungsod	Anne Jane	RMN-DXCC Velez St., Cagayan De Oro City	DXCC

94	Dy	Farina	National Dairy Autjority, Visayaz, Field Office, Mandaue City	DYAR
95	Superal	Efren	Datuc Street, Gatas District, Pagadian City/ Jamasula Street, Sta. Lucia	ITVN
96	Emphasis	Nilda	Jimenez, Misamis Occidental	DXTM
97	Feliciano Jr.	Mario	Baliwasan, Chico Zamboanga City	DXMR
98	Fernandez	Al-Husayn	Bongao, Tawi-Tawi	DXGD
99	Fernandez	Ramon	Sogod, Southern Leyte	DYSL Radyo ng Bayan
100	Gabornes	Ma. Jesselyn	Office of the Provincial Agricultural Services (OPAS) Capitol Site, Brgy. Alang-alang, Borongan City	DXES
101	Galas	Evelyn	Provincial Agriculture Office, Alunan Ave., Koronadal City	RadyoBombo- DXEP
102	Ganate	Higinio	Paradise heights, Capitol Hills, Tandag City	DXJR
103	Garado	Claro Ramiro	DYBE Naparaan, Salcedo, Eastern Samar	DYBE
104	Ibarra	Melquiades	Palma St., Cebu City	DYMR
105	Ibrahim	Baundi	Department of Agriculture 12, Carpenter Hill, Koronadal City	DXMS/ DXND
106	Ilustre	Eleanore	Radyo ng Baya, Jolo, jolo Sulu	DXSM
107	Irang	Ma. Theresa	San Nicolas, Iriga City	RPN-DZKI, TV 10
108	Jamasali	Sali	Tubig-Boh, Bongao, Tawi-tawi	DXDC
109	Jamolo	Renelyn	Bonifacio Drive, Ilo-ilo City	DYLL Radyo ng Bayan
110	Kalim	Tarhata	Office of the Provincial Agriculturist, Basement Floor. Provincial Capitol Bldg. Isuan, Sultan Kudarat	RadyoKatilingban, SKSU
111	Lagasca	Rex	Agricultural Office, Titay, Zamboanga Sibugay	DXIR
112	Llanos	Crismon	Pagadian City	PFRB

113	Llasos	Victor	Office of the Provincial Agriculturist,ProvincialCapitol Bldg., Bacolod City	DYRL
114	Lobog	Alfredo	DXAK- ASSCAT, BunawanAgusan Del Sur	DXAK
115	Lopez	Rudyarel	Veterans Village, Ipil, Zamboanga Sibugay	DXMG
116	Lopez II	Aurelio	Poblacion, Maragusan, Compostela Valley	DXLM
117	Maandig	Ercel	Bonbon, Cagayan de Oro City	DXCO
118	Macapañas	Jessa Faye	Brgy. Burayan, San Jose, Tacloban City	DYDW
119	Maderazo	Chelo	Office of the Provincial Agriculturist, Province of Leyte, cor. Jones and Del Pilar St., Tacloban City	DYMP/ DYVL
120	Manaoag Jr.	Matronello	4th Flr., Esperas Bldg., Real St., Tacloban City	BomboRadyo
121	Manriquez	Rey	Park banaba, Brgy. Veterans, Ipil, Zamboanga Sibugay	(Balita Karon)
122	Medina	Mars Downyben	2nd Flr., Moscoso Bldg., SputhPoblacion, Maramag, Bukidnon	DXGT
123	Mendoza	Carlos Ian	Montaña Bldg., Cor., Moreno-San Isidro St., MalybalayBukidnon	HAPPY FM
124	Morante	Luisito	Manila Broadcasting Co., Aksyon Radio DYVL AksyonRadyoBrgy. Campetic, Palo Leyte	DYVL
125	Muñez	Charito	CSA Building, Gensan Drive, cor. Zulueta st., Francisco Zulueta St, Koronadal City, 9506 South Cotabato	RadyoBombo/ DXEP
126	Nami	Adarus	DA Bongao, Tawi-Tawi	DXGD
127	Nelmida	Wilfredo	Cayabon, Milagros Masbate	DYME
128	Non	Edward	Department of Agriculture-ARMM, Capitol Site, Patikul, Sulu	DXMM
129	Omang	Ioannes	DYVL AksyonRadyo, PNP Road, Campetic, Palo Leyte	DYUZ
130	Padilla	Marie Jo	Room 301-302 Doña Luisa Bldg. Fuente Osmeña, Cebu	DYRC
131	Patindol	Francis	DXW- Radyo Pilipino Corp (RPC) Cagayan de Oro City	DXCO

132	Palawan	Shalini	Old Capitol, Matampay, Marawi City –D.A Lanao del Sur Office	DXEM
133	Ronquillo Jr.	Manuel	DXDD Rizal Ave., Ozamis City, Misamis Occidental	DXDD- RadyoKampana
134	Rosaroso	Francisco	Corner Real & Justice Romualdez St., Tacloban City	Univ. in the Air
135	Salvo	Lito	Department of Agriculture 12 Carpenter Hill, Kronodal City	DXCP
136	Soria	Jose Alsmith	Department of Agrarian Reform RO-no. 8, Sto. Niño Ext., Tacloban City	DYVL
137	Sta. Elena	Mary Grace	RMN-DXCC,Velez St., Cagayan De Oro City	DXCC
138	Sugian	Japhet	Duero Hills, Telaje, Tandag City	DXVP
139	Talagon	Merilyn	Department of Agriculture, MES Complex, Maguikay, Mandaue City-DYMR (Radyo ng Bayan Cebu)	DYMR
140	Tatang	Janneth	Brgy. Veterans Village, Ipil, Zamboanga Sibugay Province	Balita Karon
141	Tejada	Jay	Banlok, Brgy. Tagas, Tangalan, Aklan 5612	RGMA kalibo
142	Templonuevo	Hydee	PGO- Information Division Capitol Cmpd, Alunan Avenue, Koronadal City	DXMC/DXKR/DYCP
143	Tolentino	Ferry Jon	2F Jorge Ariosa Bldg., Brgy. Sta Lucia, Pagadian City	
144	Tomawis-Balindong	SittieAisah	Marawi City	DXSK
145	Tremedal	Philip James	Mindanao Daily News Misamis Occidental Bureau Oroqueta City	DXNT
146	Velez	Melchor	Blk 18 Lot 16 Phase 1, Grand Meadows Subdivision, Batangan, Valencia City, Bukidnon	Bukidnon
147	Ventura	Nup Donald	Rizal Blvd.,Nuro UPI, Maguindanao	DXUP-Radyo ng Bayan
148	Villasis	Salvacion	Extesion and Community Services, Aklan State University, Banga, Aklan	DYMT
149	Villanueva	Ruel	OPAG, AMAS, Kidapawan City	DXND, DXMS, DXGO
150	Viniegas	Marina	DA-Regional Field Unit 7 Compound ,Maguikay, Mandaue City	DYMR/DYAR/DYAB

151	Yamada	Carmela	VSU Radio DYDC FM 104.7, ViscaBaybay City Leyte 6521	DYDC
152	Zaid	DatuHamsur	Department of Agriculture Maguindanao, 2nd Flr., MGB Bldg., Sinsuat Ave, Cotabato City	DXMS

RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security

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The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is led by the International Center for Tropical Agriculture (CIAT). CCAFS is the world's most comprehensive global research program to examine and address the critical interactions between climate change, agriculture and food security. For more information, visit us at **https://ccafs.cgiar.org/.**

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