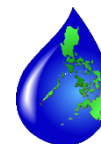


Activity Report

Event: **PAGASA River Basin Flood Forecasting & Warning Center's (RBFFWC's) Conference-Workshop**
Date: **May 8-10, 2017**
Venue: **Grand Regal Hotel, Lanang, Davao City**



Background:

The two tropical cyclone events that affected the country in October 2016, Typhoon Karen (*Sarika*) and Super Typhoon Lawin (*Haima*), had all the operational telemetry river basin centers in Luzon (Pampanga, Agno, Bicol, Cagayan) including the Flood Forecasting and Warning Section (FFWS) of HMD on flood watch status for almost 2 weeks. During that period all centers were regularly issuing flood advisories and flood bulletins. Unfortunately, there were problems and issues encountered by some of the river centers during that time mainly in the updating and dissemination of its issued flood information. In a January 2017 flood event in Mindanao area, similar issues were likewise experienced by one river basin center in the said area.

The Pampanga River Basin Flood Forecasting and Warning Center (PRFFWC), being the pilot FFWS in the country would like to share its operational activities and experiences focusing on improving and enhancing the operational FFW of not only in the major river basin centers here in Luzon but also of the upcoming new river centers in other parts of the country. Thus, a conference-workshop specifically for personnel of all river basin centers was proposed on this premise; a joint collaborative coordination led by the PRFFWC through the NCR-PRSD with the RDTD through its Training Section, the HMD and the other PRSDs of respective RBFFWCs was then undertaken. The event focused on capacitating personnel of RBFFWCs particularly on issues on how to improve its operational FFWS activities, shared experiences and issues encountered during flood watch events, worked-out contingencies and back-up plans during regular and worst-case scenarios and other relevant related activities.

In general after the event, participants were expected to develop / improve on the following:

- program of operational FFW activities in their respective centers;
- Interpretation / understanding on the information contained in weather forecasts (advisories and bulletins), and other weather-related information;
- hydrological monitoring, formulation of their daily hydrological forecasts, timely flood warning information within their target / monitored area;
- flood forecasting tools / applications within their area based on available data;
- basic warning levels of preparedness (including updating of assessment levels) within the framework of their coverage area;
- RBC (river basin center) presence and community relationship through IEC programs and rapport with local DRR agencies, etc.
- RBC sustainability and enhancement programs tied-up with their FFWC.

Conference-Workshop highlights:

The conference-workshop was proposed and organized for an intended focused group of PAGASA personnel who are manning the RBFFWC System Operations' Centers in the country, particularly the hydrologists / flood forecasters and also hydro technicians including systems' telecom engineers.

A total of 24 participants from various river basin centers attended the conference. Likewise, the following PAGASA key officials were present, some partly and others throughout the entire duration of the said event:

- Dr. Vicente B. Malano, Administrator
- Dr. Flaviana D. Hilario, Deputy Administrator for Research and Development
- Dr. Landrico U. Dalida, Jr., Deputy Administrator for Operations and Services
- Dr. Cynthia P. Celebre, Weather Services Chief, RDTD
- Dr. Bonifacio G. Pajuelas, OIC, NCR-PRSD
- Ms. Fredolina D. Baldonado, OIC, NL-PRSD
- Mr. Anthony Joseph R. Lucero, OIC, M-PRSD

The 3-day event focused mainly on presentations relating to the operational activities of RBFFWCs during flood watch and non-flood watch situations, briefings on Weather Forecasting and Warning Systems, El Niño and La Niña, among others, and personnel issues relating to the PWEA (Philippine Weathermen Employees Association). Workshop portions included river basin issues and concerns, listing of regular daily operational activities and other relevant hydrological-related activities of the center, proposed center enhancement and sustainable activities, and planned activities up until the year-end 2017. The event was capped off by a field visit on the 3rd day to the Tagum-Libuganon RBFFWC located in the provincial compound of Davao del Norte Province.

In general, the intentions of the conference-workshop was mainly to hold a venue for sharing, understanding and communicating ideas through consultative, participatory and informative interactions between participants, the hydrologists / forecasters, and with the mid-management and some upper management-level officials with the idea of pursuing an empowered river basin center.



The venue, Grand Regal Hotel in Lanang District of Davao City, provided an energetic atmosphere for presentations, discussions and participant interactions especially during the social function activity. The hotel had a pleasing ambience suitable for both relaxation and for upswing activities. Further, the weather remained quite pleasant during the whole duration of the event.

Conference-Workshop Participants and Resource Person / Lecturers:

Conference-workshop participants corresponding to their respective RBFFWC or proposed station, including their E-mails are listed below:

Name	RBFFWC / Station	E-mail address
Agas, Renier	Abra RBFFWC	renier.agas@gmail.com
Agbay, Manny John D.	Panay RBFFWC (proposed)	mjagbay715@gmail.com
Aguirre, Romeo A.	Ilog-Hilabangan (proposed)	engr.neo.aguirre@gmail.com
Albaño, Josephine G.	Bicol RBFFWC	josie03albano@yahoo.com
Bausa, Jayson W.	FFWS, HMD	jaysone84@yahoo.com
Buendia, Allen L.	Bicol RBFFWC	allenbuendia@ymail.com
Buñag, Leo L.	Cagayan RBFFWC	leobunag430@yahoo.com
Cipriano, Heart M.	Agusan RBFFWC (proposed)	heartcipriano@gmail.com
De Paz, Eva L.	FFWS, HMD	eldepaz@yahoo.com
De Vera, Gregorio II B.	Agno RBFFWC	gbdevera8@hotmail.com
Diaz, Lorenzo T.	Agno RBFFWC	enzodiaz2005@yahoo.com
Fernandez, Angelo DC.	Abulug RBFFWC	angelofernandez020389@gmail.com

Flores Jr., Victor B.	Cagayan de Oro RBFFWC	vbfloresjr@gmail.com
Go-oc, Sheila Joy L.	Buayan-Malungon (proposed)	shang_0528@yahoo.com
Lavadia, Loreto M.	Cagayan RBFFWC	den2lav@yahoo.com
Mago, Reniel R.	Bicol RBFFWC	renielmago@yahoo.com
Mahilum, Araya A.	Togoloan RBFFWC (proposed)	aamahilum@yahoo.com
Naragdao, Ronaldo C.	Jalaur RBFFWC	iloiloradar@gmail.com
Pagalilauan, Antonio C.	Cagayan RBFFWC	acpagalilauan@yahoo.com
Reonal, Francis L.	Pasig-Marikina RBFFWC	flreonal@gmail.com
Serrano, Sonia P.	FFWS, HMD	spserrano919@yahoo.com
Singson, Van Therese L.	Jalaur RBFFWC (proposed)	vtsingson08@gmail.com
Tajones, Bema C.	Davao RBFFWC	bemacominador@gmail.com
Yutuc, Rommel P.	Pampanga RBFFWC	melpyutuc@gmail.com

Conference Resource Persons / Lecturers with corresponding topics discussed and E-mails:

Name	Topic discussed	E-mail address
Mr. Anthony Joseph A. Lucero	Brief on El Niño and La Niña; Climate Change issues	dong_lucero@yahoo.com
Mr. Renito B. Paciente	Weather Forecasting & Warning Systems	
Mr. Berlin V. Mercado	FFW Telemetry System	berlinvm@yahoo.com
Ms. Margaret P. Bautista	Data Management System for RBFFWCs	margaretbautista84@yahoo.com
Engr. Socrates F. Paat, Jr.	The HMD & its policy relationship with RBFFWCs	junpaat@gmail.com
Mr. Ramon G. Agustin	The RBFFWC and PWEA Concerns	
Dr. Bonifacio G. Pajuelas	The PRSD and its policy relationship with RBFFWCs (Modernization Issues)	bgpajuelas@gmail.com
Mr. Hilton T. Hernando	Conference Backgrounder; Flood Warning Information – Formulation of Basin Flood Bulletins / Advisories; Sustaining / Enhancing the RBFFWCs; Group Dynamics and all workshop activities	prffwc_ffb@yahoo.com
Mr. Nestor B. Nimes	RBFFWCs Operational Tasks / Center activities and responsibilities	nbnimes@yahoo.com



The opening day group picture of participants, resource speakers and key PAGASA officials together with the training section personnel of RDTD. (May 08, 2017)

Summary of Presentations:

1. **Conference Backgrounder** (H.T. Hernando, PRFFWC): The introductory presentation opened-up with a brief workshop (through posting of Meta cards on a whiteboard) on RBFFWCs issues and concerns, suggested solutions and who they think can address their issues and concerns. The presentation proper generally stressed on the expectations and intentions of the gathering emphasizing on the conference-workshop mode as to being informative, consultative, and participatory; it also showed the main premise behind the proposal for the said conference and a brief pass through PAGASA's Mandate, Vision, Mission and Core Values. Finally, the resource speaker enjoined participants for their involvement / interest, commitment, enthusiasm and dedication (ICED) in the conduct of the conference proper.



The 2nd day conference group picture together with PAGASA key officials (May 09, 2017)

2. **Weather Forecasting & Warning System** (R.B. Paciente, Chief, MMSS, Weather Division): The presentation outlined on the following issues: basic weather-related terminologies, the forecast process and analysis, and tropical cyclone early warning system which centered on the 3 issued information – advisory, alert and severe weather bulletin.
3. **Brief on El Niño and La Niña** (A.J.A. Lucero, OIC, Mindanao-PRSD): The resource speaker started by revisiting the climate of the country; further on he discussed about the ENSO (El Niño Southern Oscillation) differentiating between the normal condition and the El Niño and La Niña conditions. He also showed the impacts of these various conditions to the country.
4. **FFW Telemetry System** (B.V. Mercado, OIC, HMTS, HMD): Mr. Mercado explained what is telemetry and the telemetry system showing typical set-ups and configurations; different types of automatic data collection, various rainfall and water level sensors, data loggers and communication systems. He also showed the various telemetry set-ups of the different river basin systems in the country. He stressed on the point that the various river basin centers in the country have different system set-ups and thus makes it difficult for his section to carry-out a standard protocol and maintenance activity. The presentation of Mr. Mercado gathered the most number of responses from the conference participants through questions, queries, and discussions / explanations.
5. **Data Management System for RBFFWCs** (M.P. Bautista, Chief, HISSS, HMD): The presentation mainly featured on database platform systems, in particular the Aquarius water data management software. Aquarius is a leading software suite to acquire, process, model, and publish water data to enable better decisions for sustainable management of water resources. Reactions were raised concerning the presentation inasmuch as said system is not yet available in the agency. Participants were mainly concerned on what to do and how to handle their received data at the moment. A consultative open forum decided for now to use excel, patterned with what the PRFFWC has been doing at the moment, as a means of

- handling their data; consolidating their data in electronic format (xls, txt, csv, etc.) for easy migration to other systems that will be acquired by the agency in the future.
6. **Brief presentations from each River Basin Centers:** Several presentations either through slides or just by providing updates on their respective systems were given by several of the river centers specifically the RBFFWCs of Cagayan, Abra, Agno, Pampanga, Marikina-Pasig, Bicol, Jalaur, Ilog-Hilabangan, and Cagayan de Oro.
 7. **The HMD and its policy relationship with RBFFWCs** (Engr. S.F. Paat, Jr., OIC, FFWS, HMD): The lecturer outlined on his presentation the definition of policy and eventually related this to the flood forecasting and warning policies in the office. Policy, in his presentation, was dissected as a “course of action”; he clearly pointed-out that the HMD is connected with the RBFFWCs in terms of its operational activities particularly the flood forecasting and warning activities; on the other hand, administrative matters are between the PRSDs and RBFFWCs, e.g., procurements, center operational costs, etc.
 8. **The PRSDs and its policy relationship with RBFFWCs (Modernization Issues)** (B.G. Pajuelas, Ph.D., OIC, NCR-PRSD): Owing to the fact that the previous presentation already showed a general connection between PRSDs and the RBFFWCs, the resource person delved more on the subject regarding the “PAGASA Modernization Act of 2015” which has 9 objectives and 7 components. Among the notable components he discussed included the establishment of regional weather service centers with a sub-component of flood forecasting and warning sub-centers in strategic areas (other river basin centers nationwide), establishment of PAGASA data center, and the enhancement of weather data collection and info dissemination services. Final additional info on PRSD’s policy relationship with RBFFWCs was more on implementation of mandated functions inherent to the region and to the RBFFWCs, and to ensure official orders from top management are followed consistent with existing CSC (Civil Service Commission) rules and regulations.
 9. **RBFFWCs Operational Tasks / Center activities and responsibilities** (N.B. Nimes, Sr. Wx. Specialist, PRFFWC): The presenter basically stated the various operational activities of RBFFWCs with focused reference, in particular, to the Pampanga RBFFWC. The main thought was plainly to share what are the flood watch operational activities and the regular tasks during non-flood watch phase. He also mentioned the programs and activities undertaken by the center with other regional partner agencies. The presentation initially started with a brief workshop on asking river centers to enumerate 3 daily operational activities; and also 3 regular activities (non-flood watch) that a center should carry-out at their own level.
 10. **Flood Warning Information – Formulation of Basin Flood Bulletins / Advisories** (H.T. Hernando, PRFFWC): The presentation began by going through the evolution of the development of flood information / warnings in the PRB. Further on, the presenter differentiated Flood Advisory (FA) and Flood Bulletin (FB) from one another. Emphasis were given on the aspects of flood information, particularly the “How”, the “What”, “When”, and the “Where” including the need for continuity and consistency in the sequence of events in the formulation of warning info. Issues on validating flood forecasts such percent accuracy in terms of time and magnitude of flood, the suggested time / frequency of issuance of FA / FB, and suggested points to consider before (and when) issuing FAs / FBs.
 11. **The RBFFWC and PWEA Concerns** (R.G. Agustin, President of PWEA): Mr. Agustin discussed with the participants, in general, issues relating to the welfare and the rights of the PAGASA employee. Plain and basic examples and situations were also provided and related to the present situations of field centers, in particular the RBFFWCs.
 12. **Sustaining / Enhancing the RBFFWCs (Sharing some programs and activities)** (H.T. Hernando, PRFFWC): A workshop on the following issue started-off the topic: “What activities or initiatives do you think a RBFFWC should (and can) do in order to sustain its presence / existence (and enhance its operational activities) in their basin of concern?” The last topic discussed for the whole event focused on issues on how RBFFWCs can maintain its existence in their river basin of concern assuming that there won’t be any floods for a relatively long period of time; another issue was how RBFFWCs can enhance its status in

their area of concern through tie-up programs and activities with other basin stakeholders. Simply stated, RBFFWCs exist because there are communities that are at risk to flood within their basin of concern. Various activities and programs of the PRBFFWC were shared to the participants which included counter parting programs and increase rapport with the LGUs at all levels (regional, provincial and city / municipal), school activities, the NGOs, with the NGAs and all other stakeholders within the basin of concern. All other possible in-house work programs such as coming-out with operations manual, information and dissemination materials, cross-visits, annual hydrological reports, etc. At the end of the topic, the resource person again gave a workshop to the participants as follows, “Give plans (short term say 1-2 years) you intend or proposed to undertake at your own basin level to address your sustainability / existence in your basin of concern (provide a timeline)”.

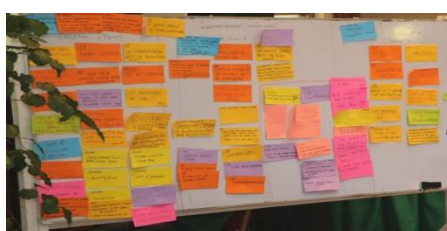
- The morning of the last day of the conference-workshop (May 10, 2017) was a field visit to the Tagum-Libuganon RBFFWC.** The personnel of the PDRRMO of Davao del Norte were on hand to assist and provide information on the RBC, the Tagum-Libuganon river basin and also about their province.

Details of the Workshops:

- Workshop No. 1:** “What are the RBFFWC issues and concerns? Suggested solutions / or possible ways to address these issues and concerns; who are the concerned / responsible entity / ies that (you think) can address these issues and concerns?”

Issues and Concerns	Suggested solutions / needs	Responsible entity / ies
Abra RBFFWC		
Not yet operational; system is still being installed	Real-time radar data connectivity	PRSD & HMD
No maintenance tools; no service vehicle		
Lack of personnel; IT personnel to be trained in modeling	Personnel training; plantilla position	Administrative Division
No hydrographic survey equipment	Procurement of hydrographic instrument	PRSD / HMD
Agno RBFFWC		
Lack of personnel	Hiring of qualified personnel	NLPRSD
Procurement issues		Admin Division
No active internet service provider in the area		
Bicol RBFFWC		
No river center or EWS (Cam. Norte)		
Obsolete equipment	rehabilitation	
Slow progress in the rehabilitation of BRFFWC	Fast track rehabilitation process	SLPRSD / Admin
Lack of personnel	Hiring of personnel	SLPRSD / Admin
Lack of expertise of field personnel	training	
Not included in BRFFWC – Labo Basin and at Cam. Norte	Creation of CBFews or inclusion in the BRB flood forecast	HMD / BRFFWC / LGU
Unreliable data due to equipment malfunction		HMTS-HMD
No service vehicle	All RBFFWCs should have a service vehicle	SLPRSD / Admin
Cagayan RBFFWC		
No equipment / instrument for hydrographic surveys	Purchase necessary equipment	NLPRSD / HMD
No service vehicle for maintenance		
Aging system	Rehabilitation of the system	
Staff not in plantilla position after rationalization	Plantilla position to be included in the modernization plan	Admin
Abulug RBFFWC not yet operational		
Cagayan De Oro RBFFWC		
WL sensor installed above established	Project Consultants and PAGASA	HMD, Project Consultants,

alert levels	counterparts should review and do remedial measures	MPRSD
Maintenance requests not addressed immediately	there should be scheduled maintenance protocol	HMTS-HMD
GUIs/online viewing platforms not working as intended (cannot view data, cannot DL data)	Lack of knowledgeable personnel, possible training	
Existing few personnel also deployed as weather forecaster/synoptic staff	Need for additional personnel	
Confusion on the role of River Center in urban flash flooding	Discuss with HMD and RBFFWCs	HMD, PRSDs, RBFFWCs
No standard for posting flood info on social media	Needs discussion with HMD and RBFFWCs	HMD and PRSDs
There should be an Annual Conference-Workshop for all River Basin Centers and HMD.	Annual conference-workshop should be institutionalized in PAGASA's annual program	
Jalaur RBFFWC		
RBFFWC is situated within the Radar building		
Lack of personnel	hiring	VPRSD
Security issues and vandalism		
Ilog-Hilabangan RBFFWC		
Lack of personnel	Possible hiring	VPRSD
Personnel security (insurgency issues)		LGU
Maintenance of Telemetry system		
Pampanga RBFFWC		
Need for an IT knowledgeable person	Possible hiring of IT personnel and / or training of some of its personnel	NCR-PRSD
Flash flood warning issues / Thunderstorm warnings	Real-time Radar image directly linked to center and a flash flood detection software	HMD, NCR-PRSD
FFWS - HMD		
Flash Flood warning issuance	Since HMD is designated for forecasting flash floods and storm surges, radar software should be installed in the operation center of HMD.	Meeting of HMD heads for the formulation of flash flood warning (format, etc.)
Components of GFA (area of concerns)	Meeting with HMD heads and RBFFWCs	HMD and RBFFWCs
Update of websites of RBFFWCs	RBFFWCs should have their own respective websites for their own updating similar to PRBFFWC	HMD and RBFFWCs
Other RBFFWCs issues...		
RB centers still under construction (Agusan); monitoring system still being installed at the moment (Davao); One-man center (Tagum-Libuganon); No center yet (Agus); etc.		



The result of this workshop reflected many similar issues and concerns that most RBFFWCs are faced with at the moment. Personnel and equipment issues are mostly mentioned in the table above other than the still non-operational system of many of the upcoming RBFFWCs.

- Workshop No. 2:** This workshop focused on whether RBFFWCs are aware of their daily regular duties and what other activities should be carried-out at their own level. “List down 3 operational tasks that your center do regularly (daily basis); 3 activities (or responsibilities) that a center should carry-out at their own level.”

3 daily operational activities	3 activities (responsibilities) of a center
Agno RBFFWC	
Data entry to the database from display panel	Prepare Hydro forecasts
Check monitoring system of 7 (?) computers	
Check the observed RR & WL in each monitoring stations	
Bicol RBFFWC	
Daily monitoring of RR-WL data	Supervises the monitoring of data (RR-WL)
Updating of the database of observed telemetered data	Check attendance of personnel
Prepare and download the 1-day hydrological forecast	Check working condition of instruments and data storage
	Answer phone calls; assist visitors on their queries; encoding and archiving of data
Pampanga RBFFWC	
Formulate hydrological forecast for the day	Conduct hydrographic surveys
Update and upload hydro forecast & status of RR-WL of the basin in the center's website	Attend and actively participate in IECs; tie-up programs and activities with basin stakeholders
Update center's information board and database	Accommodate walk-in clients; phone calls, interviews, etc.
Abra RBFFWC	
Hydro Forecast	IEC
Monitoring of ARG and WL	Provide weather forecast (in native dialect)
Archiving and Data Quality-control	Flood Modeling, RIDF, conduct post-flood analysis
	Issue accurate & timely flood forecast during inclement weather
	Improve flood forecasting techniques
Cagayan RBFFWC	
Conduct IEC (flood drills, basin familiarization)	
Repair / maintenance	
Issue flood bulletins	
Issue local weather forecast and TSTM warnings	
Data quality control, statistical data analysis	
Encoding hourly RR-WL data	
Jalaur RBFFWC	
Monitor data from various telemetry station	
Conduct cross-sectioning within the basin	
Routine preventive maintenance of various telemetry stations	
CDO RBFFWC	
Data entry and quality-control	
Monitor hydro condition (most of the time (weather forecasting, Observation & TSTM/rainfall warning)	
Basic preventive maintenance	
Hydrological analysis (modeling, RIDFs, post-flood evaluation)	

Not all RBFFWC participated in this workshop, particularly those that are not yet operational. The workshop clearly shows a non-defined specific daily operational task for most of RBFFWCs; many are not really aware of what their daily output should be. Some even did not delineate daily operational task from their usual responsibilities and activities. A focus on this particular activity area should be given immediate and utmost attention and action by concerned divisions as it is quite imperative that a well-defined daily operational task be formulated in all RBFFWC.

- Workshop No. 3:** "What activities or initiatives do you think a RBFFWC should (and can) do in order to sustain its presence / existence (and enhance its operational activities) in their basin of concern?"

Agno RBFFWC	Cagayan RBFFWC
Attend / conduct IEC	Hydrographic survey
Conduct hydrographic surveys / update flood assessment levels	Statistical Data analysis

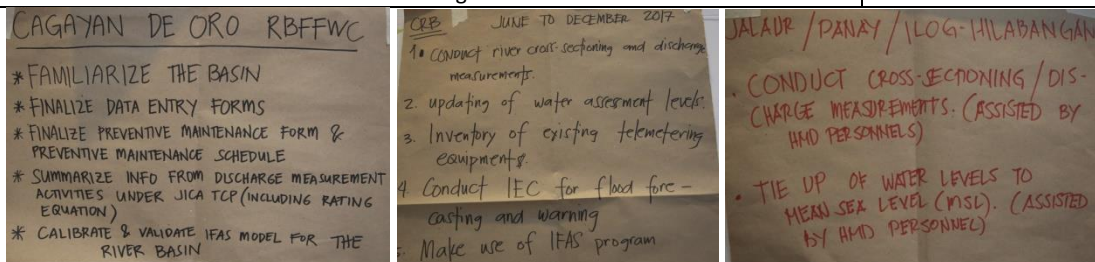
Quality-control of hydromet data	Continuous maintenance of equipment
	Data collection
Abra RBFFWC	Bicol RBFFWC
Continuous IEC	Data analysis for application in flood models
Surveys and validations	Install flood markers just for preparation for upcoming flood (in the future)
Jalaur RBFFWC	Update data storage and use it in statistical analysis
IEC	Conduct inspection and rehabilitation of stations and instruments
Improvement / maintenance / repair of basin facilities	Conduct IEC in flood-prone areas
Collaborate with LGU & NGA involved in flood-related disaster mitigation and other related activities	
FFWS - HMD	
IEC	Verification of data / validation
Simulation of flood models	Inspection / upgrade of equipment
Non-operational RBFFWCs	
IEC	Research (Hydromet related)
Updating of Rating Curve (DM / X-section)	

In this workshop, it is quite obvious that IEC (information & Education Campaign) happens to be the top response from most of the respondents. The PRBFFWC intentionally did not participate in this workshop as it aims to share the programs and activities it has been carrying-out at its basin of concern.

- Workshop No. 4: Prior to this workshop, a presentation was shared regarding the various programs and activities that the PRBFFWC have been carrying-out and initiating in its River Basin. The workshop activity question goes as “Give plans (short-term of 1-2 years only) you intend or propose to undertake at your basin level to address your sustainability / existence in the basin of concern (provide a proposed timeline)”

RBFFWC planned activities / programs	Timeline (until end of the year)
Abra RBFFWC	
Conduct IEC	Until Dec 2017
Agno RBFFWC	
Seminar for opening of RBFFWC	
IECs	
Creation of Manuals, Maps	
Six (6) continuous IECs	
Six (6) surveys and validation	
Update flood assessment levels	
Bicol RBFFWC	
Data analysis for flood models	
Draft of General Information on Flood & Telemetry System following the pattern of Pampanga River Basin (Review of Literature, Consolidation of data, lay out of manual cover, draft contents, compilation)	
Conduct inspection and rehabilitation of station and instruments	
Conduct IEC in flood prone areas	
Update data storage and use it in statistical analysis	
Jalaur-Panay-Ilog-Hilabangan RBFFWCs	
Conduct cross-sectioning & discharge measurements (assisted by HMD personnel)	
Tie-up of WL to MSL (assisted by HMD personnel)	
Collaborate with LGU/National Agency involved in flood disaster mitigation and other related activities	
Cagayan RBFFWC	
Conduct river cross-sectioning and discharge measurements	June to December
Update WL flood assessment levels	
Inventory of existing telemetry equipment	
Conduct IEC for flood forecasting & warning	
Make use of IFAS program	
CDO RBFFWC	
Familiarization of the basin	

Finalize data entry forms	
Finalize preventive maintenance form and preventive maintenance schedule	
Summarize info of discharge measurement activities under JICA TCP (including rating equation)	
Calibrate and validate IFAS model for the river basin	
FFWS - HMD	
To establish an operational system that will address information of RR-WL data (consistency, validity & integrity) or status of equipment & RR instruments.	
To modify existing HMD website in addressing concerns from other river basin centers and prevent overlapping of every areas	
Simulation of flood models	
IEC	
Non-operational RBFFWCs	
River basin familiarization	1 year duration
Conduct hydrographic surveys	-do-
Establish assessment levels	-do-
Coordination with LGUs and other concerned agencies	-do-



This activity workshop was purposely done to enjoin and engage RBFFWCs to focus on what they plan and intend to do in the coming months after the workshop-conference. Once again PRBFFWC did not participate in the said workshop but mainly shared and provided suggestions based on the present and on-going thrusts of the center in its community rapport and relationships within the river basin aside from its usual continuing center enhancement programs and activities.

Achievements, agreements and suggestions:

The PAGASA River Basin Flood Forecasting & Warning Centers Conference-Workshop held on May 8-10, 2017 was the first ever consolidated river basin center gathering activity conducted by PAGASA since flood forecasting and warning system started in the county in 1973. Obviously, it was only at the Pampanga River Basin that such system (FFWS) existed, not until mid-1980s when the Agno, Bicol and Cagayan River Basins FFWS were commissioned as a result of the effectiveness of the system in the PRB. To date, about 7 river centers are operational nationwide with incoming new river centers which are now on its construction and installation stages.

Presentations and discussions during the event came up with several ramifications:

- FFWS of HMD would look into the updating of daily hydrological forecasts of other RBFFWCs for the moment; however, operational RBFFWCs will try to work-out their own center websites similar to what the PRBFFWC has already been doing;
- River basin center “buddy-buddy” system was raised hoping that this may provide additional enhancement of the operational hydrological monitoring between adjacent river basins especially during inclement weather conditions;
- RBFFWCs to use the data encoding format (in excel) of the PRBFFWC for now;
- A clamor for an annual RBFFWCs conference-workshop;
- Tacit agreement between conference participants to fully devolve the FFW operational activities and programs to RBFFWCs.

Some suggested topics submitted by the participants in the next conference-workshop, should there be one, included rainfall-intensity duration frequency (RIDF), some hydro model apps, issues on low

network connectivity, river standards, more detailed center operations, and IT (information technology) issues.

Recommendation and Ways forward:

Considering that there were limitations of topics that have been presented to the participants in this conference-workshop and likewise the importance of having a continuing RBFFWCs program in a community setting, it is quite essential that a similar program of activities in this line of undertaking be carried out on a regular basis. Therefore, it is highly recommended that such activity be institutionalized in PAGASA on an annual basis. This is one way of establishing and maintaining a common ground of activities (standardization of programs and activities) for all river basin centers in the country; further, ensuring the sustainability and enhancement of each RBFFWCs in the country. The ultimate goal is to have River Basin Center empowerment.



The last day group picture taken at the Provincial Hall of Davao del Norte Province (May 10, 2017)



PRFFWC-30 May 2017

E-mail: prffwc_ffb@yahoo.com

Websites: prffwc.webs.com / prffwc.synthasite.com



just search for "PRFFWC"