# 中国气象局

### CHINA METEOROLOGICAL ADMINISTRATION

46 Zhongguancun Nandajie, Beijing 100081, China

**Date:** 24 August 2015

Mr. M. Jarraud, Secretary-General, WMO

**Fax No.:** +41 22 730 8181

From: Dr. ZHENG Guoguang, Permanent Representative of China with WMO

Attachments: 4

To:

Our Ref.: CMA/F1/WMO/15-103

Subject: Nomination to the NPOMS-4

Dear Mr. M. Jarraud,

I wish to refer to your letter dated 24 July 2015, concerning the Fourth Capacity Building Workshop of the WMO/IOC Data Buoy Cooperation Panel (DBCP) for the North Pacific Ocean and Its Marginal Seas (NPOMS-4) to be held in Busan, Republic of Korea, from 2 to 4 November 2015.

I am pleased to nominate Mr. LIN Liangxun, Mr. OU Jianjun, Ms. GU Hua and Ms. LI Xiaoxia to participate in this workshop.

Please find attached the nomination forms for your consideration.

With my best personal regards,

Sincerely yours,

(ZHENG Guoguang)
Permanent Representative

of China with WMO

Telephone: +86 10 62172957 Fax: +86 10 62174797 E-mail: guoji@cma.gov.cn

### 8778-15/OBS/WIGOS/OSD/MAR/NPOMS4, ANNEX 2

### **NOMINATION / REGISTRATION FORM**

IOC-WMO Fourth Capacity Building Workshop of the Data Buoy Cooperation Panel (DBCP) for the North Pacific Ocean and Its Marginal Seas

The Government of:	China
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proposes the following nomination:

NOTE TO THE NOMINATED PARTICIPANT:
PLEASE COMPLETE ALL THE QUESTIONS IN THIS FORM. PLEASE WRITE CLEARLY, AND
SUBMIT IT, PREFERABLY, IN ELECTRONIC FORMAT.

Mr /Mrs /Dr /etc	Ms / Ms	Dr / Professor / Eng / etc.	
Family name	LIN		
First name	Liangxun		
Job title	Chief Forecaster		
Professional specialization	Meteorology		
Graduation degree(s)	Bachelor Degree		
ADDRESS: Dept/Div.	Guangdong Meteorological Observatory, China Meteorological Administration		
Street	6, Fujin Road		
Suite/Office/etc	Guangdong Meteorologic	cal Service	
City /postal codes	Guangzhou/510080		
State/Province/etc	tc Guangdong		
COUNTRY	RY China		
Tel. number(s)	ber(s) +862087678951, +8613660398627		
Fax number(s)	number(s) +862087774919		
E-mail(s) - PLEASE W	RITE YOUR E-MAIL(S) VERY CLE	ARLY	
E-mail (1) liangxun_lin@grmc.gov.cn E-mail (2) qxt_llx@163.com			
Job responsibilities:			
As a chief forecaste cyclone and heavy	•	ecast technology guidance and making tropical	
Financial assistance	is requested for:	avel per diem 🔽	

### ANNEX 2, p. 2

QUE	STIONS TO THE EXPERT NOMINATED FOR THE TRAINING WORKSHOP	
1.	Please indicate the plans you may have in your country for:	
	(i) initialization/maintenance ocean observing systems in Eastern Asia region, and/or;	
	<ul><li>(ii) cooperation with international programmes regarding the implementation of such systems</li><li>(e.g. through the provision of instrument deployment opportunities).</li></ul>	
	N.B.: Please use a separate sheet to provide a brief description on this question.	
1.	Please indicate the plans you may have in your country for:	
	(i) utilizing ocean observing systems in Eastern Asia region, for improving typhoon track and intensity forecasts;	
	(ii) cooperation with international programmes regarding the implementation of such systems (e.g. through the provision of instrument deployment opportunities).	
	N.B.: Please use a separate sheet to provide a brief description on this question.	
3.	Do you have an understanding of physical oceanography and the basics in geophysical fluid dynamics (e.g. Equation of State, etc.)? Yes, I have an understanding of the basics in atmospheric dynamics	nics.
4.	What operating system will you have on your laptop (e.g. PC/Windows, Linux-Ubuntu, Linux-Mandriva, etc.)? Windows.	
	4.1. What is your level of knowledge and experience with your Operating System (O/S), and with an alternative system (with Windows in case your O/S is Linux; and with Linux in case your O/S is Windows)?  Skilled in Windows.	
<b>5.</b>	What do you expect from this Training Workshop? I would like to learn something about improving tropical cyclone track and intensity forecast with buoy data.	
6.	In your view, what would make the Training Workshop successful? Experienced teachers and operational skills.	
7.	Do you have any questions or comments? No.	
8.	Did you participate at NPOMS-1 or NPOMS-2? No.	

PLEASE NOTE, ONLY NOMINATION/REGISTRATION FORMS, SIGNED BY THE PERMANENT REPRESENTATIVE (PR) OF YOUR COUNTRY WITH WMO OR THE IOC ACTION ADDRESSEE(S) OF YOUR COUNTRY, WILL BE CONSIDERED.

Name of PR with WMO or IOC Action Addressee: Dr ZHENG Guoguang

Date: 24 August 2015

(Signature of the Permanent Representative with WNO or IOC Action Addressee)

Please return the completed form before 31 August 2014, preferably by e-mail, to the attention of Mr Tom Gross, t.gross@unesco.org, with cc: Mr Etienne Charpentier, echarpentier@wmo.int, and/or to the WMO Secretariat, at:

Please indicate the plans you may have in your country for:

- (iii) initialization/maintenance ocean observing systems in Eastern Asia region, and/or;
- (iv) cooperation with international programmes regarding the implementation of such systems(e.g. through the provision of instrument deployment opportunities).
- N.B.:Please use a separatesheet to provide a brief description on this question.

In the recent 10 years, 4 buoy stations have been installed in the offshore waters of Guangdong for improving tropical cyclone forecast. In the next years, studies will be carried out on data continuity and rationality analysis to support suggestion of maintenance.

Please indicate the plan you may have in your country for:

- (iii) utilizing ocean observing systems in Eastern Asia region, for improving typhoon track and intensity forecasts;
- (iv)cooperation with international programmes regarding the implementation of such systems(e.g. through the provision of instrument deployment opportunities).
- N.B.:Please use a separatesheet to provide a brief description on this question.

Lead Guangdong tropical cyclone research group to study:

- 1) research on tropical cyclone intensity determination.
- 2) tropical cyclone abrupt intensity change in offshore waters of Guangdong province.
- 3) the relationship between average winds and gusts within tropical cyclone circulation.

### 8778-15/OBS/WIGOS/OSD/MAR/NPOMS4, ANNEX 2

### **NOMINATION / REGISTRATION FORM**

IOC-WMO Fourth Capacity Building Workshop of the Data Buoy Cooperation Panel (DBCP) for the North Pacific Ocean and Its Marginal Seas

The Government of:	China	
proposes the following nomination:		

NOTE TO THE NOMINATED PARTICIPANT:
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SUBMIT IT, PREFERABLY, IN ELECTRONIC FORMAT.

Mr /Mrs /Dr /etc	₩ / Ms	Dr / Professor / Eng / etc.	
Family name	Ou	<u> </u>	
First name	Jianjun		
Job title	Buoy operator engineer		
Professional specialization	Buoy data processing and analysis		
Graduation degree(s)	Master's Degree (Atmospheric Physics and Atmospheric Environment)		
ADDRESS: Dept/Div.	Shanghai Marine Meteorological Centre		
Street	No. 36 on HaiJi	Six Road	
Suite/Office/etc	Department of Marine Meteorology Observation		
City /postal codes	Shanghai, 201306		
State/Province/etc	Shanghai		
COUNTRY	China		
Tel. number(s)	+86 - 21-68282206		
Fax number(s)	+86 - 21-68282227		
E-mail(s) - PLEASE W	RITE YOUR E-MAIL(S)	VERY CLEARLY	
E-mail (1) ivoolon E-mail (2) oujianj@	g@163.com gmail.com		
		in marine meteorology buoy management and to ensure thouted in the Yellow Sea and the East Sea of China region.	

ocean dynamic response to typhoon, and freak wave under impact of typhoon, etc.

travel ...

per diem 🕡

Financial assistance is requested for:

### QUESTIONS TO THE EXPERT NOMINATED FOR THE TRAINING WORKSHOP 1. Please indicate the plans you may have in your country for: (i) initialization/maintenance ocean observing systems in Eastern Asia region, and/or; (ii) cooperation with international programmes regarding the implementation of such systems (e.g. through the provision of instrument deployment opportunities). N.B.: Please use a separate sheet to provide a brief description on this question. 1. Please indicate the plans you may have in your country for: (i) utilizing ocean observing systems in Eastern Asia region, for improving typhoon track and intensity forecasts; (ii) cooperation with international programmes regarding the implementation of such systems (e.g. through the provision of instrument deployment opportunities). N.B.: Please use a separate sheet to provide a brief description on this question. 3. Do you have an understanding of physical oceanography and the basics in geophysical fluid dynamics (e.g. Equation of State, etc.)? Yes. See attached for more. What operating system will you have on your laptop (e.g. PC/Windows, Linux-Ubuntu, Linux-4. Mandriva, etc.)? Windows. 4.1. What is your level of knowledge and experience with your Operating System (O/S), and with an alternative system (with Windows in case your O/S is Linux; and with Linux in case your O/S is Windows)? I am skilled with Windows and Linux. What do you expect from this Training Workshop? 5. See attached. In your view, what would make the Training Workshop successful? 6. Rich experience of the lecturers, and team discussion on experience. 7. Do you have any questions or comments? It would be helpful if the course will continue on line in the future. Did you participate at NPOMS-1 or NPOMS-2? No.

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Name of PR with WMO or IOC Action Addressee: Dr ZHENG Guoguang

Date: 24 August 2015

(Signature of the Pormanent Jeplesentative with WMO or IOC Action Addressee)

Please return the completed form before 31 August 2014, preferably by e-mail, to the attention of Mr Tom Gross, t.gross@unesco.org, with cc: Mr Etienne Charpentier, echarpentier@wmo.int, and/or to the WMO Secretariat, at:

#### QUESTIONS TO THE EXPERT NOMINATED FOR THE TRAINING WORKSHOP

- 1 please indicate the plans you may have in your country for:
  - (i) initialization/maintenance ocean observing systems in Eastern Asia region, and/or (ii) cooperation with international programmes regarding the implementation of such systems. In the responsible region of Shanghai Marine Meteorological Center, there are 10 buoys, 5 ship stations for meteorological observation, 28 automatic weather observation, stations on islands, 2. tide gauge stations and 4 wave, stations. These stations were co-built with marine related domestic institutions, such as Maritime Safety Administration of China, Institute of Oceanology of Chinese Academy of Science, Xiamen University and so on. The instrument maintainence and protection are completed together with our cooperation partners.
- 2 Please indicate the plans you may have in your country for:
  - (i) utilizing ocean observing systems in Eastern Asia region, for improving typhoon track and intensity forecasts; (ii) cooperation with international programmes regarding the implementation of such system

Our buoys play an important role in measuring typhoon stength and location determination. The location of East China Sea Buoy is at 31N, 124.5E. The distance between the buoy and typhoon Bolaven (2012) is 110km, and the distance to typhoon Tembin (2012) is 50km. Both of them are in the radius of the 50 knot wind speed and can reveal the eye wall and core structure. Super typhoon Haikui (2012) made landfall on the north of Zhejiang Province. East China Sea Buoy, Sea Reef Buoy and Channel Buoywere located respectively out of the radius of the 34 knotwind speed out of radius of 50 knot wind speed and in the radius of 50 knot wind speed. These observations verified the accuracy of typhoon intensity identified by CMA.

- Do you have an understanding of physical oceanography and the basics in geophysical fluid dynamics (e.g. Equation of State, etc.)
  - I mainly studied atmospheric physics and atmospheric environment courses in my graduate student stage. Since I came into Shanghai Marine Meteorological Center after graduation I began to learn the oceanographic knowledge, especially marine meteorological observation and application of observation data.
- What operating system will you have on your laptop (e.g. PC / Windows, Linux-Ubuntu, Linux-Mandriva, etc.)?
  - 4.1 . What is your level of knowledge and experience with your Operating System (0/S), and with an alternative system (with Windows in case your 0/S is Linux; and with Linux in case your 0/S is Windows)? Skill with Windows and familiar with Linux.
- 5 What do you expect from this Training Workshop?

As a buoy operator and manager, I hope to learn the experience of management and operation of the buoy equipment through this training. And I also wish to learn the method to select the key areas to locate buoys, quality control and application of the buoy data.

6	In your view, what would make the Training Workshop successful?	
	Teachers with rich experience and group discussion	
7	Do you have any questions or comments?	
<u> </u>	It would be helpful if online-study could be organized in the future.	
8	Did you participate at NPOMS-1 or NPOMS-2?	
	No.	

### 8778-15/OBS/WIGOS/OSD/MAR/NPOMS4, ANNEX 2

### **NOMINATION / REGISTRATION FORM**

IOC-WMO Fourth Capacity Building Workshop of the Data Buoy Cooperation Panel (DBCP) for the North Pacific Ocean and Its Marginal Seas

The Government of:	China	
	proposes the following nomination:	

NOTE TO THE NOMINATED PARTICIPANT: PLEASE COMPLETE ALL THE QUESTIONS IN THIS FORM. PLEASE WRITE CLEARLY, AND SUBMIT IT, PREFERABLY, IN ELECTRONIC FORMAT.

Mr /Mrs /Dr /etc	Mr' / 🏎	Dr / Professor / Eng / etc.	
Family name	GU		
First name	HUA		
Job title	Typhoon Forecaster		
Professional specialization	Typhoon forecast		
Graduation degree(s)	Master Degree in meteorology		
ADDRESS: Dept/Div.	Typhoon Forecast Div., Typhoon and Marine Weather Forecast Centre, NMC,CMA		
Street	46 Zhongguancun Nand	ajie	
Suite/Office/etc	National Meteorological	Centre	
City /postal codes	Beijing, 100081		
State/Province/etc	Beijing		
COUNTRY	China		
Tel. number(s)	+86 - 10 68400457		
Fax number(s)	+86 - 10 62172956		
E-mail(s) - PLEASE W	RITE YOUR E-MAIL(S) VERY CLE	ARLY	
E-mail (1) guhua@cma.gov.cn E-mail (2) guhua1999@126.com			
Job responsibilities:	Typhoon analysis and for	recast including center location and intensity ana-	
	yphoon track and its inter		
Financial assistance	is requested for: tr	avel per diem 7	

#### ANNEX 2, p. 2

### OUESTIONS TO THE EXPERT NOMINATED FOR THE TRAINING WORKSHOP 1. Please indicate the plans you may have in your country for: (i) initialization/maintenance ocean observing systems in Eastern Asia region, and/or; (ii) cooperation with international programmes regarding the implementation of such systems (e.g. through the provision of instrument deployment opportunities). N.B.: Please use a separate sheet to provide a brief description on this question. 1. Please indicate the plans you may have in your country for: (i) utilizing ocean observing systems in Eastern Asia region, for improving typhoon track and intensity forecasts; (ii) cooperation with international programmes regarding the implementation of such systems (e.g. through the provision of instrument deployment opportunities). N.B.: Please use a separate sheet to provide a brief description on this question. Do you have an understanding of physical oceanography and the basics in geophysical fluid dynamics 3. (e.g. Equation of State, etc.)? Yes. 4. What operating system will you have on your laptop (e.g. PC/Windows, Linux-Ubuntu, Linux-Mandriva, etc.)? Windows. 4.1. What is your level of knowledge and experience with your Operating System (O/S), and with an alternative system (with Windows in case your O/S is Linux; and with Linux in case your O/S is Windows)? Skilled in Windows. What do you expect from this Training Workshop? 5. To deepen the understanding of the typhoon-ocean interactions. In your view, what would make the Training Workshop successful? 6. 1. More communications. 2. To make practicable cooperation plans. 7. Do you have any questions or comments? The current situation of ocean observing system in East Asia is not very clear to me. 8. Did you participate at NPOMS-1 or NPOMS-2? No.

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Name of PR with WMO or IOC Action Addressee:

Dr ZHENG Guoguang

Date: 24 August 2015

(Signature of the Permanent Representative with WMO or IOC Action Addressee)

Please return the completed form before 31 August 2014, preferably by e-mail, to the attention of Mr Tom Gross, t.gross@unesco.org, with cc: Mr Etienne Charpentier, echarpentier@wmo.int, and/or to the WMO Secretariat, at:

World Meteorological Organization, Observing and Information Services Department (OBS) P.O. Box 2300, CH-1211 GENEVA 2, Switzerland Fax: (+41 22) 730 8021

Appendix to GU Hua's nomination form

QUESTIONS TO THE EXPERT NOMINATED FOR THE TRAINING WORKSHOP

- Q1. please indicate the plans you may have in your country for:
- (i) initialization/maintenance ocean observing systems in Eastern Asia region, and/or (ii) cooperation with international programmes regarding the implementation of such systems
- 1) An integ rated o cean and m arine meteorological observing system is crucial for CMA to provide better service to the nation through reduced dam age of typhoon, improved understanding of climate change. CMA takes the development of the sustainable ocean observing capability as a priority. By far, overall 290 island based stations, 382 shore based stations, 39 volunteer observing ships (VOS), 30 buoys, 15 of fshore platform based stations, 5 geostationary meteorological satellites (FY-2E, FY-2F, FY-2G, FY-3B, FY-3C), 11 boundary wind profiler, as well as other observing facilities were effectively integrated at national and regional levels. In the near future, CMA will deploy more automated weather stations on islands, vessels and more buoys in China seas, and build new observation ships.
- 2) Cooperation with international programmes and organizations is very important for CMA regarding the sustainable operations a nd quality assessment of ocean observing systems, information exchange, the integration of multi-source observing data and efficient transfor mation of these data in to useful products and services. CMA is willing to be involved in existing and future international programmes and make contributions to the improvement of ocean observing systems in the East Asia region.

### Q2. Please indicate the plans you may have in your country for:

- (i) utilizing ocean observing systems in Eastern Asia region, for improving typhoon track and intensity forecasts; (ii) cooperation with international programmes regarding the implementation of such system
- 1) A quick assimilation system is under study which will incorporate different types of marine observations including buoys, ship observations and islands observations, radar data etc. and will produce an analysis gridded field in China seas.
- 2) GRAPES Regional T yphoon Prediction Model (GRAPES-TYM) is a typhoon prediction model developed by NMC/CM A based on CMA GRAPES-MESO model. More ocean observing data will be used in GRAPES-TYM, which will be useful to improve the model forecast ability.
- 3) The geostationary satellite FY -2F could be switched into intensified observations mode with m inimal tem poral observing interval of 5 m inutes to capture th e occurrences and evo lution char acteristic of TCs. FY -2F is very important in TC monitoring and forecasting.

### 8778-15/OBS/WIGOS/OSD/MAR/NPOMS4, ANNEX 2

### **NOMINATION / REGISTRATION FORM**

IOC-WMO Fourth Capacity Building Workshop of the Data Buoy Cooperation Panel (DBCP) for the North Pacific Ocean and Its Marginal Seas

proposes the following nomination:

China

The Government of:

Financial assistance is requested for:

PLEASE CO	MPLETE ALL	THE QUES	IE NOMINATED PARTICIPANT: TIONS IN THIS FORM. PLEASE WRITE CLEARLY, AND ERABLY, IN ELECTRONIC FORMAT.	
Mr /Mrs /Dr /etc	Mr / Ms	Mrs	Dr / Professor / Eng / etc. Senior engineer	
Family name	Li			
First name	Xiaoxia			
Job title	Senior engineer			
Professional specialization	Marine observation, mainly on moored buoy operation , research and data analysis			
Graduation degree(s)	Master	Master		
ADDRESS: Dept/Div.	Meteorological Observation Centre			
Street	46, Zhongguancun Nandajie			
Suite/Office/etc	China Mete	orological Ad	ministration	
City /postal codes	100081			
State/Province/etc	Beijing			
COUNTRY	China			
Tel. number(s)	8610-58995	5861		
Fax number(s)	Fax number(s) 8610-68409001			
E-mail(s) - <i>PLEASE W</i>	RITE YOUR E-	MAIL(S) VER	Y CLEARLY	
E-mail (1) lxxaoc@cn	-			
E-mail (2) lixiaoxia86	68@163.com			
Job responsibilities:	:			
			e meteorological observation system and doing research in buoy gical Administration.	

travel 🗹

per diem 🗹

QUE	STIONS TO THE EXPERT NOMINATED FOR THE TRAINING WORKSHOP
1.	Please indicate the plans you may have in your country for:
	(i) initialization/maintenance ocean observing systems in Eastern Asia region, and/or;
	<ul><li>(ii) cooperation with international programmes regarding the implementation of such systems (e.g. through the provision of instrument deployment opportunities).</li></ul>
	N.B.: Please use a separate sheet to provide a brief description on this question.
1.	Please indicate the plans you may have in your country for:
	(i) utilizing ocean observing systems in Eastern Asia region, for improving typhoon track and intensity forecasts;
	<ul><li>(ii) cooperation with international programmes regarding the implementation of such systems (e.g. through the provision of instrument deployment opportunities).</li></ul>
	N.B.: Please use a separate sheet to provide a brief description on this question.
3.	Do you have an understanding of physical oceanography and the basics in geophysical fluid dynamics (e.g. Equation of State, etc.)? Yes.
4.	What operating system will you have on your laptop (e.g. PC/Windows, Linux-Ubuntu, Linux-Mandriva, etc.)? PC/Windows
	4.1. What is your level of knowledge and experience with your Operating System (O/S), and with an alternative system (with Windows in case your O/S is Linux; and with Linux in case your O/S is Windows)?
	Skilled with Windows system
5.	What do you expect from this Training Workshop?
	Moored buoy data operating method, data quality control method and related data management.
6.	In your view, what would make the Training Workshop successful?  Effective communication.
7.	Do you have any questions or comments?
	No.
8.	Did you participate at NPOMS-1 or NPOMS-2? No.

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Name of PR with WMO or IOC Action Addressee:

Dr. ZHENG Guoguang

Date: 24 August 2615

· (Signature of the Permanent Representative with WMO or IOC Action Addressee)

Please return the completed form before 31 August 2014, preferably by e-mail, to the attention of Mr Tom Gross, t.gross@unesco.org, with cc: Mr Etienne Charpentier, echarpentier@wmo.int, and/or to the WMO Secretariat, at:

### QUESTIONS TO THE EXPERT NOMINATED FOR THE TRAINING WORKSHOP:

- 1.Please indicate the plans you may have in your country for:
- (1) initialization/maintenance ocean observing systems in eastern Asia region ,and/or;
- (2) cooperation with international programmes regarding the implementation of such systems (through the provision of instrument deployment opportunities)

Several moored buoy will be installed to meet the forecast and service requirements. Drifting buoy observation experiment would be conducted in the future. We will exchange the experiment methods with collaborators.

- 2. Please indicate the plans you may have in your country for:
- 1 Utilizing ocean observing systems in eastern Asia region for improving typhoon track and intensity forecasts;
- 2 Cooperation with international programmes regarding the implementation of such systems (through the provision of instrument deployment opportunities)

The moored and drifting buoy observation experiment will provide more data to improve typhoon track and intensity forecasts. The existing methods of data analysis would be improved.