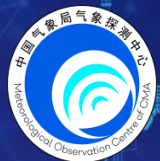


Activities of Regional WIGOS Centre(Beijing)

(RWC-Beijing)

LIN Xuejiao

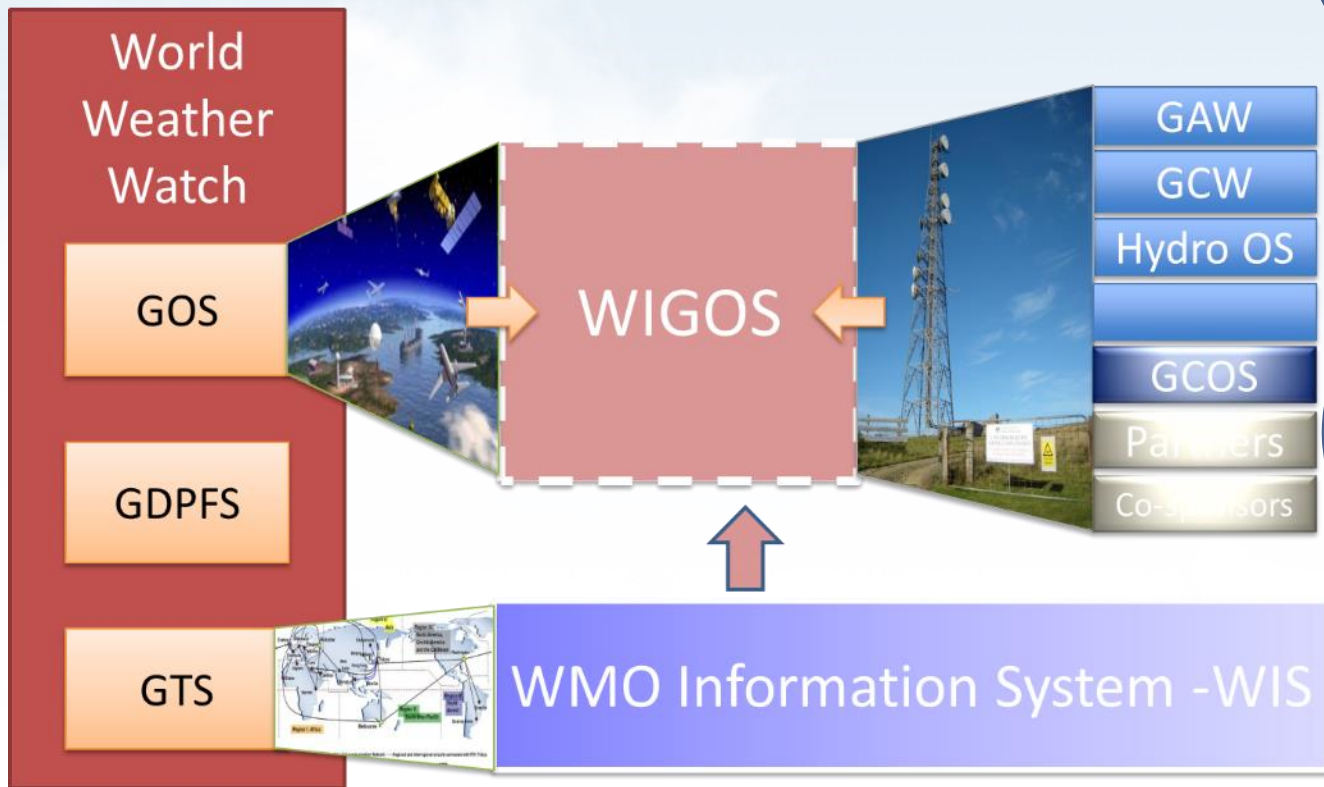
Meteorological Observation Centre of
China Meteorological Administration



Background

In recent years, the World Meteorological Organization Integrated Global Observing System (WIGOS) has been always listed as WMO highest priority, and its Regional Associations are encouraged to set up Regional WIGOS Centers (RWC) to help their Members accelerate WIGOS implementation.

Component of WIGOS



Milestones of RWC-Beijing

2021

RWC-Beijing was recognized as one of the first operational RWCs in the world.

2020

Transition from pilot phase to operational phase.

2019

RWC-Beijing upgraded of operation capability.

2018

RWC-Beijing started the pilot operation.

2017

Applied to establish RWC-Beijing.



Functions

Regional coordination, guidance, oversight and support of WIGOS implementation and operational activities at the regional and national levels (day-to-day level of activities).

Mandatory Functions

- 1. Regional WIGOS metadata management** (work with data providers to facilitate collecting, updating and providing quality control of WIGOS metadata in OSCAR/Surface);
- 2. Regional WIGOS performance monitoring and incident management** (WIGOS Data Quality Monitoring System) and follow-up with data providers in case of data availability or data quality issues.

Optional Functions

- (a) assistance with the coordination of regional/sub-regional and national WIGOS projects;
- (b) assistance with regional and national observing network management;
- (c) support for regional capacity development activities.

RWC-Beijing covers both mandatory and optional functions

Basic & Technical Infrastructure

National Meteorological Observation Operations Platform

- 7 * 24 duty tasks
- Monitor data quality in real time
- Quickly find and solve problems
- Adequate, secure, fully-equipped
- adequate information technology facilities and infrastructure
- Powerful processing ability and storage



Human Resources & Operating Mechanism

Management

CMA

Management Team →

Technical Management

Foreign Affairs Management

↓ Management

MOC of CMA

Operation Office →

Specialists

OSCAR/Surface
RRR
Quality Evaluation
AMDAR
Radiosonde
Land-Surface
RIC Beijing
Ocean

Operation Office →

Real-time on Duty

Responsibility	Number
The chief on duty	12
Staff on duty	22
Staff on guarantee for operation and maintenance	3

**GISC, WMC, RIC, RCC, RTC
.....**

Collaboration

WIGOS Data Quality Monitoring System (WDQMS)



real time monitoring

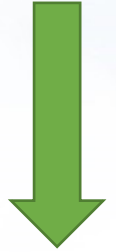


Find & Analysis

Observing Systems Capability Analysis and Review tool (OSCAR/Surface)



metadata management



Incident Management System (IMS)



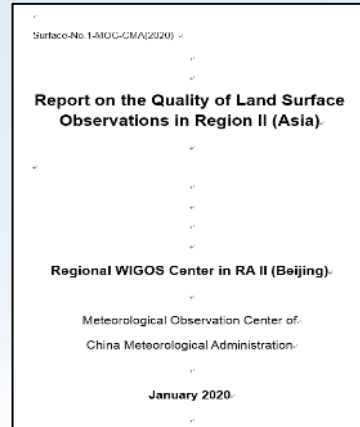
problem tracking & improvement

solve

RA II Monitoring & Analysis



RA II Monitoring & Analysis System

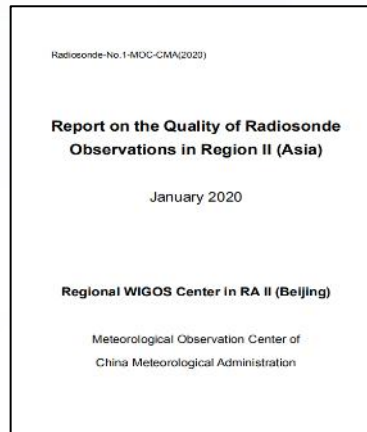


Land Surface Report

Document Title	Date
Report on the Quality of Radiosonde Observations in Region II (Asia) - May 2020	18 Jun 2020 07:29 UTC
Report on the Quality of Radiosonde Observations in Region II (Asia) - April 2020	26 May 2020 08:20 UTC
Overview of National NWP Development of China	18 May 2020 01:25 UTC
Report on the Quality of Radiosonde Observations in Region II (Asia) - March 2020	23 Apr 2020 10:13 UTC
Report on the Quality of Radiosonde Observations in Region II (Asia) - February 2020	17 Apr 2020 02:47 UTC
Report on the Quality of Radiosonde Observations in Region II (Asia) - January 2020	17 Apr 2020 02:43 UTC



Metadata Management System



Radiosonde Report

Website

<http://www.wmcbj.net/publish/cms/documents/index.html>

Email the RA II National Focal Points

rwc-bj@cma.gov.cn

Data Quality Monitoring and Evaluation Technology

CMA numerical weather forecast

Land Surface

Station number: 3000+

Times: 00、06、12、18

Elements: Mean sea level pressure、Geopotential height

Radiosonde

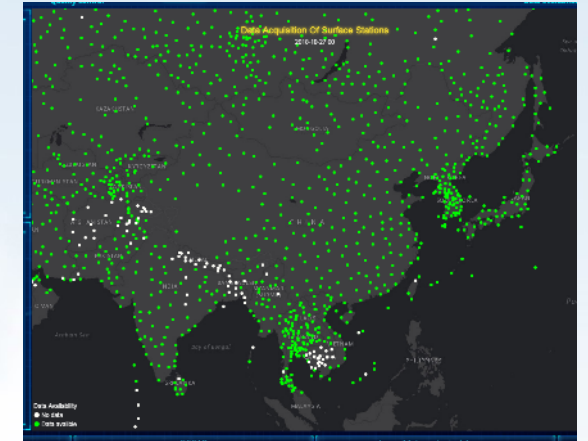
Station number: 289

Times: 00、12 (UTC)

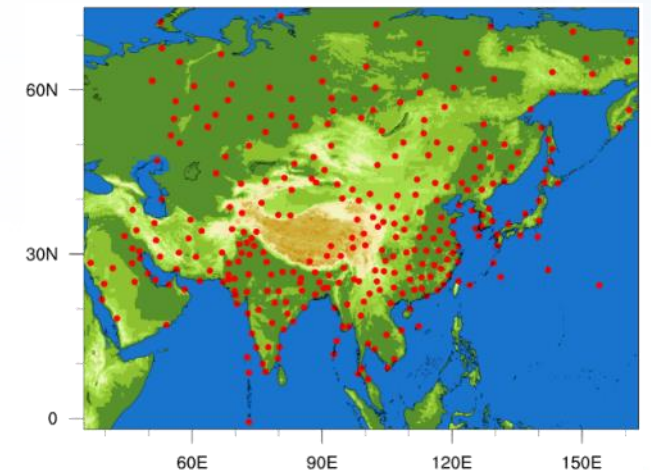
Elements & levels: Geopotential height 14 levels

Wind direction 6 levels

Vector wind 11 levels



Land Surface stations



Radiosonde stations

Combined with results from <https://wdqms.wmo.int/>

Issue Types

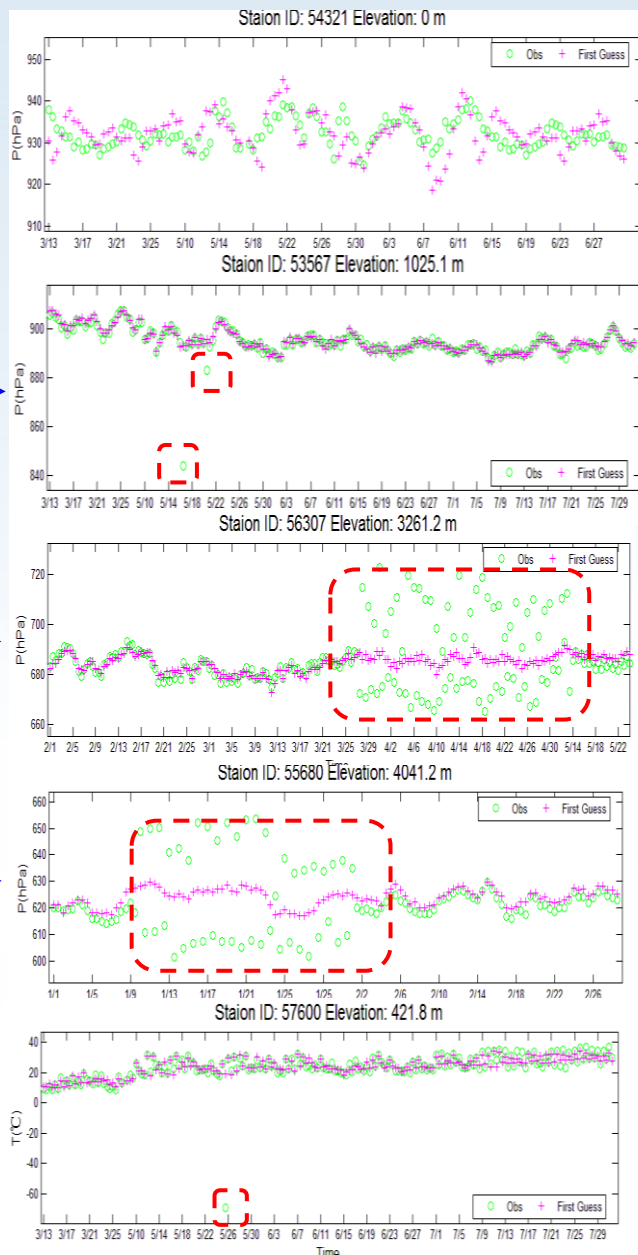
Land Surface

Latitude and longitude error

Biological interference

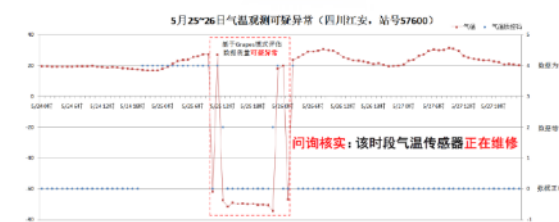
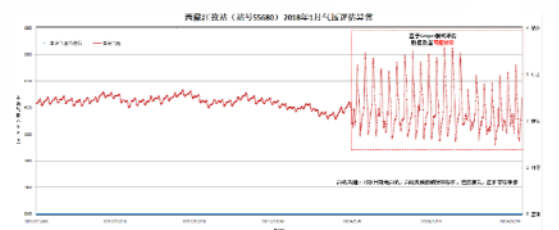
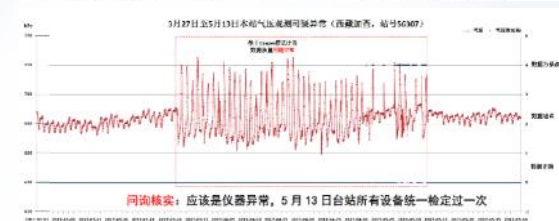
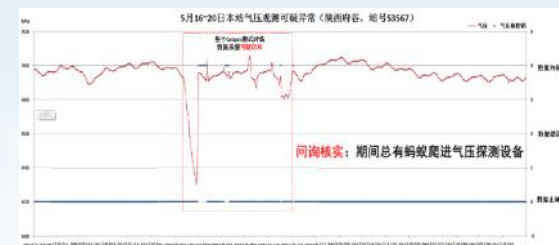
Pressure sensor issue

Temperature sensor maintenance



国家自动站经纬度信息时序图 (辽宁建平, 站号54321)

站号	纬度	经度	海拔高度	气压传感器海拔
54021	41.8628	121.83	95	0
54021	41.8683	121.7311	68.8	68.7



Monitoring, Evaluation and Incident Management

List of Suspicious Stations (July–December 2021)

Members (Group A)	Land surface			Radiosonde		
	Monitored Suspicious Stations	Quality improved	Remaining Suspicious	Monitored Suspicious Stations	Quality improved	Remaining Suspicious
Afghanistan	5		5	2		2
Bahrain						
Bangladesh						
Bhutan						
India	31	5	26	11	1	10
Iraq	2		2	2		2
Islamic Republic of Iran	51		51	1		1
Kuwait	2		2	1		1
Maldives						
Nepal	4	3	1			
Oman	26	22	4			
Pakistan	6		6	6		6
Qatar	2		2			
Saudi Arabia	8	1	7	1	1	0
Sri Lanka	2		2			
United Arab Emirates						
Yemen	4		4	2		2

Monitoring

Evaluation

Feedback

Tracking

Improvement


International WIGOS Workshops



The International Distance Training Course on the Instruments

RWC-BJ & RTC-BJ (08.2020)

➤ **685 candidates**, from **74 Members**, including RA I, II, III, IV, V, VI. More than **400 trainees (60% of the total numbers)** have completed the main courses.

			
Introduction of Meteorological Services in CMA & Education and Training in CMA Training Centre By WANG Meihua, Deputy Director-General, China Meteorological Administration Training Centre, WMO RTC in Beijing	Maintenance and Repair of DZZ Automatic Weather Station (AWS) WMO RTC in Beijing, China Meteorological Administration Training Centre, WMO RTC in Beijing	The WMO Integrated Global Observing System (WIGOS) WMO RTC in Beijing, China Meteorological Administration Training Centre, WMO RTC in Beijing	Regional WIGOS Centre RWC-Beijing
Part I Orientation Course Orientation and Ice breaking Introduction of Meteorological Services in CMA Introduction of Education and Training in CMA Training Centre	Part II The Maintenance of Automatic Meteorological Stations Components and principle of AWS Installation and maintenance of the Installation and maintenance of the tipping bucket rainfall sensor	Part III OSCAR & Metadata Introduction of WMO Integrated Global Observing System (WIGOS) WIGOS Metadata Management (OSCAR/Surface)	Part IV RWC China's Integrated Meteorological Observing System Regional WIGOS Centre(RWC) and Data Quality Evaluation

The International Distance Training Course on WIGOS

RWC-BJ & RTC-BJ (08.2021)

➤ **251 candidates**, from **54 Members**, including RA I, II, III, IV, V, VI.

The International Distance Training Course on WIGOS
2021.8
RWC-Beijing & RTC-Beijing



Re: WIGOS Metadata Management (OSCAR/Surface)
by Kartika Saridewi - Monday, 3 August 2020, 1:00 PM
I'm really excited to join with this course :)

Re: WIGOS Metadata Management (OSCAR/Surface)
by UJJWAL KANTI PAL - Tuesday, 11 August 2020, 6:47 PM
I'm really excited to join with this course :)

Dear Ms Lin Xuejiao,
Thank you very much for sharing this information. **It is great that RWC Beijing is organizing such courses.** I hope that the course is proceeding well. I am really **impressed by the number** of people that registered to the course. This suggests there is very **demand for such courses.**

Thanks, for this good training
by Mohamad Ma'ufbada - Sunday, 16 August 2020, 10:29 PM
so, I just want to say thanks to all of the trainer and the organizer, however this training provide good knowledge for me. Big thanks from Papua.

Thanks
by Sayed Mohammad Reza Judi - Sunday, 16 August 2020, 4:12 PM
Thank you for holding this training course and I hope I can participate in your next courses as well

WMO (previously through CIMO and CBS), and now through INFCOM is working on several activities related topic. I would therefore be really interested to know if any information, possibly lecture notes, or recordings presentations are/will be available on-line. If so, we would be really grateful if you could provide us with a link information, that we could share with relevant WMO expert teams.

Acknowledgment
by Miad Dehghani - Friday, 21 August 2020, 10:12 AM
Hi CMA,
Thanks for holding this course and hope I participate in the other ones at future.

Thank you CMA
by Putu Hadi - Friday, 21 August 2020, 9:08 AM
Thank you CMA

Maybe some **collaboration between the INFCOM expert teams and the RWC** could be beneficial to both parties organization of future activities.

Thank you CMA
by dodri apandi - Friday, 14 August 2020, 6:29 PM
The course was very informative. Thank you

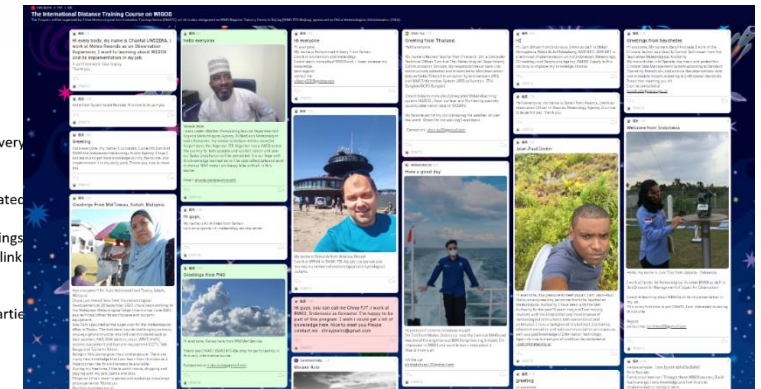
Thanks CMA
by Mutau Mutau - Wednesday, 19 August 2020, 7:10 PM
continue good work

Many thanks in advance for your feedback and best regards,

Thank you for the training
by Mattaniah Eteuati Salesa - Monday, 17 August 2020, 6:01 AM
We appreciate you all

Thanks CMA
by Rajendra Charan - Monday, 17 August 2020, 1:03 PM

Isabelle Rüedi



Regional WIGOS Center in RA II (RWC-Beijing)

Messages from trainees

Email from WMO

International Technical Training, Comparison and Technology Exchange

RWC-Beijing & Regional Instrument Centre(Beijing)

Time

2019

2018

2018

2018

2018

2018

2018

2018

2018



Beijing, Nov 2018

CMA & KMA, Beijing, Dec 2019

Workshop-Beijing, Nov 2018



CMA & KMA, Beijing, Apr 2019



NAMEM & CMA, Nov 2018

Beijing, Nov 2017

SHMA & CMA, May 2018

二区协WIGOS区域中心-北京
Regional WIGOS Center in RA II (RWC-Beijing)

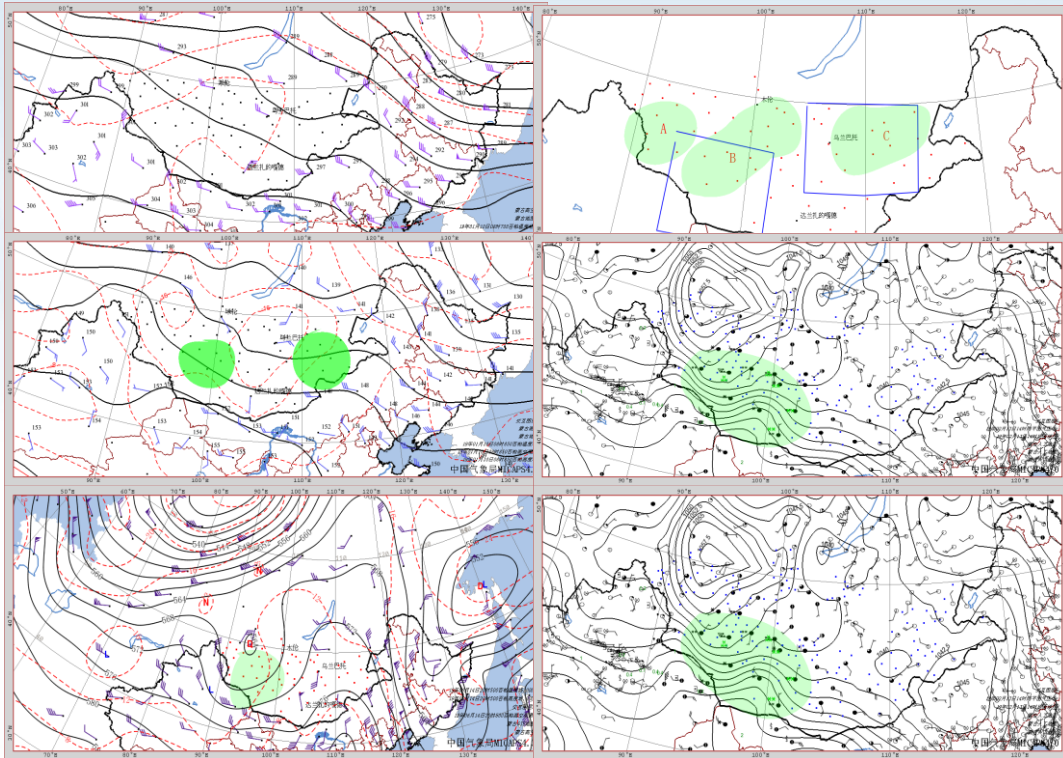
2019.12

Republic of Korea

Technical Training

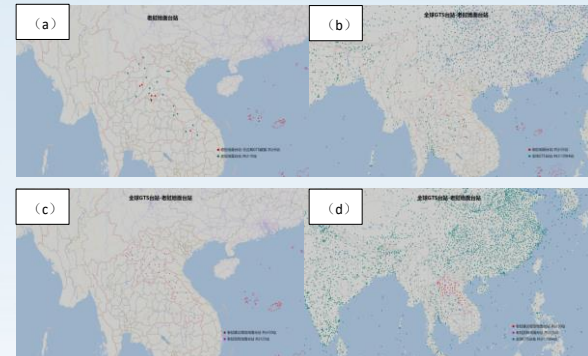


The Practices of Rolling Review of Requirements Process Helped Mongolia and Lao.P.D.R design network layout(2019-2020)



upper-air stations-
It is recommended to **increase the station density** to at least below 80km.

land surface stations-
It is suggested to **add 3 stations**.



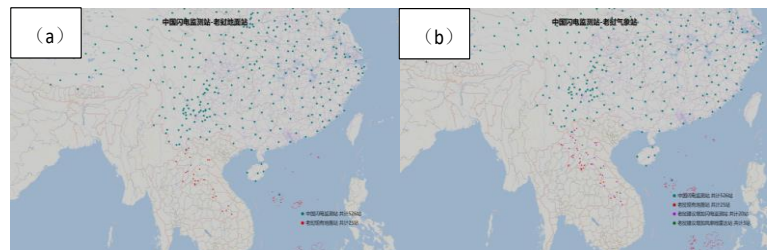
land surface stations

It is recommended to **add 50 land surface stations**.



upper-air stations

It is recommended to **add 6 upper-air stations**.



lightning observation and wind-profiling radar

It is recommended to **add 20 lightning observation stations and 3 wind-profiling radar**.

Links to other WMO Entities



RIC-Beijing: Regional Instrument Centre

Metrology knowledge training and instrument calibration

GISC-Beijing: Global Information System Centre

International data exchange and data support(WIS,GTS)

WMC-BJ: World Meteorological Centre

Models and forecasts.

RTC-Nanjing / Beijing : Regional Training Centre

Training courses

RCC-BJ: Regional Climate Centre

Long-range forecasts and products

THANKS

Please contact us at any time.



Regional WIGOS Centre, Beijing (RWC-Beijing)
Meteorological Observation Centre of CMA

rwc-bj@cma.gov.cn