

20 October 2023

GBON National Gap Analysis of Kiribati

Systematic Observations
Financing Facility

**Weather
and climate
data for
resilience**





Screening of the National Gap Analysis (NGA) of Kiribati

WMO Technical Authority screens the GBON National Gap Analysis to ensure consistency with the GBON regulations and provides feedback for revisions as needed. *The screening of the NGA is conducted according to the SOFF Operational Guidance Handbook, version: 04.07.2023 and the provisions in Decision 5.7 of the SOFF Steering Committee.*

Following iterations with the peer advisor and beneficiary country, WMO Technical Authority confirms that the National Gap Analysis is consistent with GBON regulations.

Date: 25th Oct 2023

Signature:

Albert Fischer

Director, WIGOS Branch, Infrastructure Department, WMO

GBON National Gap Analysis Report

Kiribati

Beneficiary Country Focal Point and Institute	Ueneta Toorua, PR & Director, Kiribati Meteorological Service
Peer Advisor Focal Point and Institute	Andrew Jones, General Manager International Development, Bureau of Meteorology, Australia

1. Country information from the GBON Global Gap Analysis

Table I. WMO GBON Global Gap Analysis (June 2023). Illustration of the information that the WMO Secretariat provides to each country

A. GBON horizontal resolution requirements	B. Target	C. Reporting to req.	D. Gap to improve	E. Gap new	F. Gap total
Surface stations Standard density 200 km	14	0	8	6	14
Upper-air stations over land Standard density 500km	4	0	2	2	4

2. Analysis of existing GBON stations and their status against GBON requirements

Table II. Assessment of existent stations per their operational status and network ownership

GBON Requirements	Existing observation stations (# of stations)			
	NMHS network		Third-party network	
	Reporting to req.	To improve	Reporting to req.	To improve
Surface land stations Standard density 200km Variables: SLP, T, H, W, P, SD	0	17	0	2
Upper-air stations operated from land Horizontal resolution: 500km Vertical resolution: 100m, up to 30 hPa Variables: T, H, W	0	1	0	0
Surface marine stations in Exclusive Economic Zones: 500 km Variables: SLP, SST	0	0	0	1

Table III. Assessment of existing GBON stations per station characteristics. Station type: S: Surface, UA: Upper-Air; M: Marine; Owner of the station: NMHS or name of third-party; GBON variables: SLP: Atmospheric pressure; T: Temperature; H: Humidity; W: wind; P: Precipitation; SD: Snow depth; SST: Sea surface temperature; Reporting cycle: Number of observation reports exchanged internationally per day (0-24); GBON compliance: weather the station is GBON compliant or not (see GBON guide on compliance criteria).

Station name	Station type (S/UA/M)	Owner (NMHS/3rd party)	Funding source [^]	GBON variable measured							Reporting cycle (obs/day)	GBON Compliant (Y/N)
				SLP	T	H	W	P	SD	SST		
Arorae*	S	NHMS	NHMS	X	X	X	X	X			4~	N
Beru*	S	NHMS	NHMS	X	X	X	X	X			4~	N
Butaritari*	S	NHMS	NHMS	X	X	X	X	X			0~	N
Kiritimati*	S	NHMS	NHMS	X	X	X	X	X			8~	N
Kanton*	S	NHMS	NHMS	X	X	X	X	X			2~	N
Bonriki, Tarawa*	S	NHMS	NHMS	X	X	X	X	X			8~	N
Betio, Tarawa*	S	NHMS	NHMS	X	X	X	X	X			2~	N
Banaba**	S	NHMS	NHMS								Closed	N
Fanning Island**	S	NHMS	NHMS								Closed	N
Bonriki AWOS	S	Aviation	Aid/GECI	X	X	X	X	X			Out/serv	N
Kiritimati AWOS	S	Aviation	Aid/GECI	X	X	X	X	X			Out/serv	N
Maiana	S	NHMS	UNDP/NIWA	X	X	X	X	X			0	N
Abemama	S	NHMS	UNDP/NIWA	X	X	X	X	X			0	N
Nonouti	S	NHMS	UNDP/NIWA	X	X	X	X	X			0	N
Banaba	S	NHMS	UNDP/OTT	X	X	X	X	X			Not yet installed	N
Tamana	S	NHMS	UNDP/OTT	X	X	X	X	X			0	N
Onotoa	S	NHMS	UNDP/OTT	X	X	X	X	X			0	N
Tab North	S	NHMS	UNDP/OTT	X	X	X	X	X			Out/serv	N
Makin	S	NHMS	UNDP/OTT	X	X	X	X	X			Not yet installed	N
Betio, Tarawa	UA	NHMS	UK Met Off		X	X	X				1~	N
Tarawa Tide	M	BOM	BOM	X	X		X				0	N

*Staffed stations

**Former staffed stations

[^]AWS Supplier also shown after slash

~Reporting frequency is variable. Sample frequencies shown here are from Oct 5, 2023.

3. Results of the GBON National Gap Analysis

Table IV. Results of the GBON national gap analysis. SLP: Atmospheric pressure; T: Temperature; H: Humidity; W: wind; P: Precipitation; SD: Snow depth; SST: Sea surface temperature.

GBON requirements	GBON target (# of stations)	GBON Compliant stations (#)	Stations gap	
			To improve	New
Surface land stations Standard density 200km Variables: SLP, T, H, W, SD Observing cycle: 1h	14	0	14	0
Upper-air stations operated from land Standard density 500km Vertical resolution: 100m, up to 30 hpa Variables: T, H, W Observing cycle: twice a day	4	0	1	3**
Surface marine stations in Exclusive Economic Zones: Density 500 km Variables: SLP, SST Observing cycle: 1h			1*	

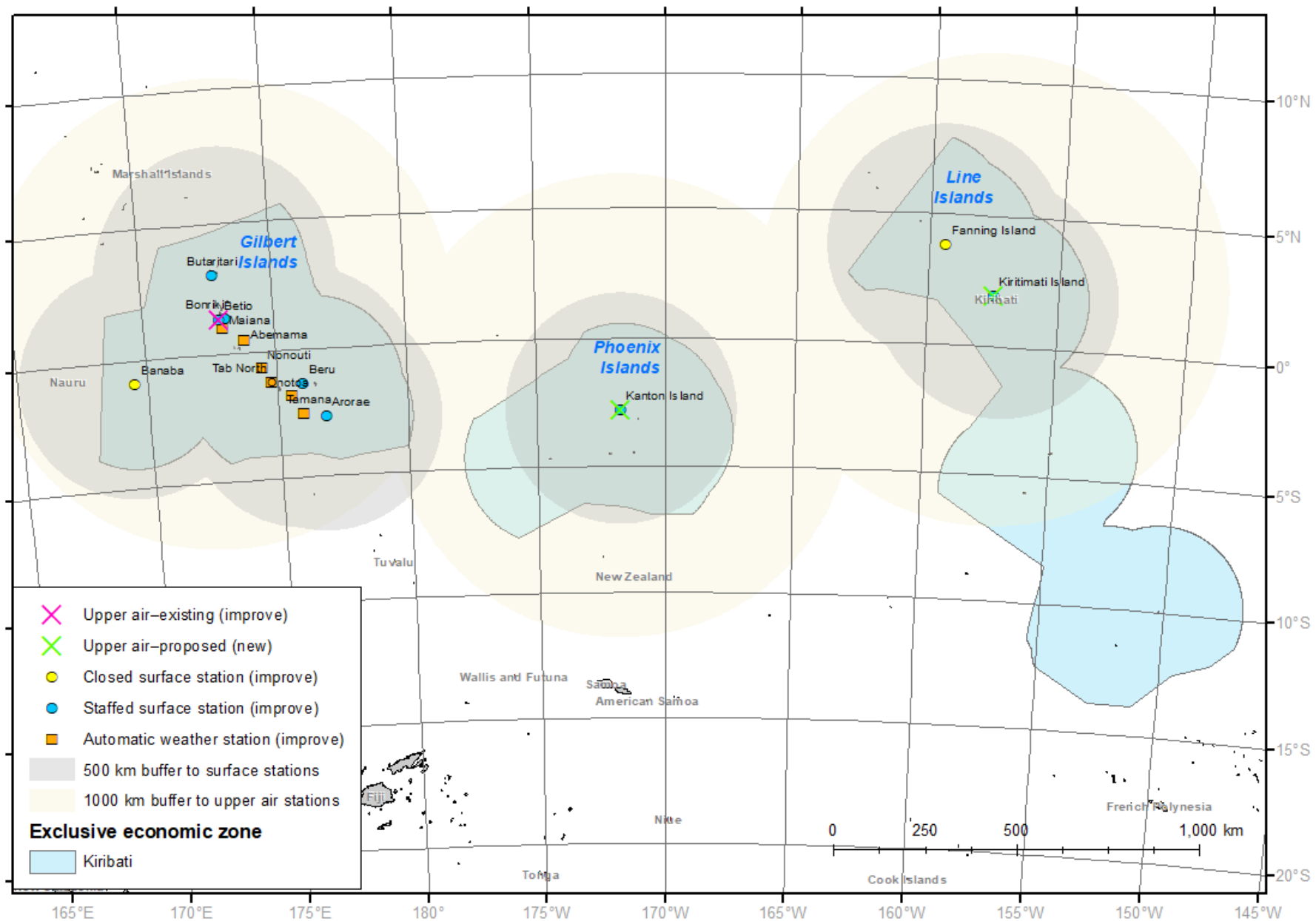
*Bureau-operated tide gauge site will be improved to report internationally for sea level pressure.

**Kiribati will seek an exemption from the GBON requirement for a fourth upper air station, associated with the large EEZ in the southern Line Islands, on the grounds of impracticality in this extremely remote, uninhabited marine zone.

3.1 Recommended existing surface, upper-air and marine stations to be designated to GBON

Table V. Recommended existing surface, upper-air and marine stations to be designated to GBON.

Station name	Station type (S/UA/M)
Nil stations currently compliant.	



4. Report completion signatures

Peer Advisor signature



WMO Technical Authority screening signature



Beneficiary Country Signature



Ueneta Toorua (Mr.)
Director, Kiribati meteorological Service