Appendix 1

WMO Pilot Project on World City Forecasts
Bulletin format for the exchange of city forecasts

1. Starting line

ZCZC nnn

nnn - transmission sequence number

2. Abbreviated heading

FP$A_1 A_2$ii CCCC YYGGgg

The symbols have the following meanings:

Designator	Meaning
F	Indicating a forecast message
P	Message designated for public and be in text format
$A_1 A_2$	Two-letter country or territory designators, for example, ID = Indonesia
ii	01-19 for global distribution. This two-digit number should be chosen by originating WMO Members
CCCC	Four-letter location indicator of the station originating or compiling the bulletin
YYGGgg	International date-time group in UTC: YY - day of the month GGgg - time of compilation

3.   Text of forecasts

Below is the format of city forecasts. (Important note: time and date in **local time**):

```
FORECAST ISSUED AT HHMM ON yyyymmdd
FD DAY FORECAST

CITYNAME
DM     S   Tmin  /  Tmax   S  (   F   S  )  WX
DM     S   Tmin  /  Tmax   S  (   F   S  )  WX
õ

CITYNAME
DM     S   Tmin  /  Tmax   S  (   F   S  )  WX
õ
```

The symbols have the following meanings:

Designator	Meaning
HHMM	Local time with HH - hour (00-23) and MM - minute (00 - 59)
yyyymmdd	yyyy - year, mm - month (01-12) and dd - day of the month (01 - 31)
FD	Number of day of forecasts to be provided in the message
CITYNAME	City name for the city forecasts
DM	Day of the month
T_{min}	Minimum temperature rounded off to integer. Use **NA** to represent missing data.
T_{max}	Maximum temperature rounded off to integer. Use **NA** to represent missing data.
(õ)	The code in parenthesis is optional. The brackets should **not** be included in the message.
F	This optional code is for temperatures in Fahrenheit only. If not specified, temperatures are assumed to be in Celsius.
WX	Weather in (i) plain language plus WWIS icon code; (ii) plain language or (iii) ww code , see *Notes on coding of weather forecast "WX"* on the following page.
S	A single space character

4.   End of message

NNNN

Notes on coding of weather forecast "WX"

1. Weather forecast "WX" is recommended to be specified in English weather description plus a four-digit WWIS icon code (see WWIS Weather Icon Table). This icon code will be used to display the desirable weather icon in the WWIS website. This format for "WX" can reflect the original meaning of your forecast most preciously. Please separate weather description and four-digit WWIS icon code by "@".

2. It is ***highly recommended*** to submit forecast to the WWIS in the above format. If there are difficulties in using the aforementioned format, you may either use (a) English weather description only or (b) a two-digit ww code. The sample bulletins are shown on the following page.

3. It is permissible to add a time, spatial or intensity modifier to an English weather description.

4. It should keep weather forecast in one line.

5. The list of weather types and modifiers is given below.

6. For weather provided in two-digit code, the idea of WMO's SYNOP coding practice for present weather (ww) is adopted.

7. "NA" is used to specify that the weather forecast "WX" is not available.

List of suggested weather types and modifiers

1. **Weather Types**

Weather Types	Weather elements
State of Sky	Bright, Clear, Cloudy, Fine, Fair, Overcast, Sunny
Visibility	Dust/Dusty, Fog/Foggy, Haze/Hazy, Mist/Misty, Smoke
Precipitation	Drizzle, Hail, Rain/Rainy, Snow, Showers, Thundershowers
Others	Duststorm, Dry, Sandstorm, Squall, Thunderstorms, Thundery, Wet, Windy

2. **Intensity Modifiers**
   A few, Dense, Heavy, Light, Moderate, Severe

3. **Time Modifiers**
   In the afternoon, At first, At night, At times, Frequent, Intervals, Later, Mainly, In the morning, Occasional, Partly, Periods, In the evening

4. **Spatial Modifiers**

Isolated, Patches, Scattered

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Examples:

i.	Cloudy	(No modifier)
ii.	Rain at night	(Time modifier)
iii.	Isolated showers	(Spatial modifier)
iv.	Severe thunderstorms	(Intensity modifier)

Sample bulletins

1. Sample bulletin with English weather description plus WWIS icon code (Highly Recommended) - please refer *WWIS Weather Icon Table*

(originator = Indonesia)

```
ZCZC 100
FPID01 WIII 290900
FORECAST ISSUED AT 1700 ON 20150929
5 DAY FORECAST

JAKARTA
30   24/33  PARTLY CLOUDY IN THE MORNING, RAIN AT NIGHT @2202
31   24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502
01   24/33  SUNNY PERIODS. ISOLATED SHOWERS IN THE AFTERNOON @1101
02   24/33  SUNNY PERIODS. ISOLATED SHOWERS IN THE AFTERNOON @1101
03   24/33  SUNNY PERIODS. ISOLATED SHOWERS IN THE AFTERNOON @1101

AMBON
30   24/33  SHOWERS IN THE MORNING, CLOUDY IN THE AFTERNOON @0901
31   24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502
01   24/33  FOG IN THE EARLY MORNING BECOMING PARTLY CLOUDY @1601
02   24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502
03   24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502

BALIKPAPAN
30   24/33  CLOUDY IN THE MORNING, SHOWERS IN THE AFTERNOON @1001
31   24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502
01   24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502
02   24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502
03   NA/NA  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING @1502

NNNN
```

2. Sample bulletin with English weather description only

(originator = Indonesia)

```
ZCZC 100
FPID01 WIII 290900
FORECAST ISSUED AT 1700 ON 20150929
5 DAY FORECAST

JAKARTA
30  24/33  PARTLY CLOUDY IN THE MORNING, RAIN AT NIGHT
31  24/33  RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING
01  24/33  SUNNY PERIODS. ISOLATED SHOWERS IN THE AFTERNOON
02  24/33  SUNNY PERIODS. ISOLATED SHOWERS IN THE AFTERNOON
03  24/33  SUNNY PERIODS. ISOLATED SHOWERS IN THE AFTERNOON

AMBON
30  24/33  SHOWERS IN THE MORNING, CLOUDY IN THE AFTERNOON
```

```
31   24/33   RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING
01   24/33   FOG IN THE EARLY MORNING BECOMING PARTLY CLOUDY
02   24/33   FOG IN THE EARLY MORNING BECOMING PARTLY CLOUDY
03   24/33   FOG IN THE EARLY MORNING BECOMING PARTLY CLOUDY


BALIKPAPAN
30   24/33   CLOUDY IN THE MORNING, SHOWERS IN THE AFTERNOON
31   24/33   RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING
01   24/33   RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING
02   24/33   RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING
03   NA/NA   RAIN IN THE MORNING, PARTLY CLOUDY IN THE EVENING


NNNN
```

3.   Sample bulletin with weather in code form – please refer to *WMO codes for present weather (ww)*

(originator = Indonesia)

```
ZCZC 100
FPID01 WIII 290900
FORECAST ISSUED AT 1700 ON 20150929
5 DAY FORECAST

JAKARTA
30   24/33   01
31   24/33   03
01   24/33   11
02   24/33   11
03   24/33   11


AMBON
30   24/33   01
31   24/33   03
01   24/33   11
02   24/33   11
03   24/33   11


BALIKPAPAN
30   24/33   01
31   24/33   03
01   24/33   03
02   24/33   03
03   NA/NA   11


NNNN
```

WWIS Weather Icon Table

Icon Code	Weather	Icon
0101	Sandstorm	
0102	Duststorm	
0103	Sand	
0104	Dust	
0201	Thunderstorms	
0202	Thundershowers	
0203	Storm	
0204	Lightning	
0301	Hail	
0401	Blowing Snow	
0402	Blizzard	
0403	Snowdrift	
0404	Snowstorm	
0501	Snow Showers	
0502	Flurries	
0601	Snow	
0602	Heavy Snow	
0603	Snowfall	
0701	Light Snow	
0801	Sleet	
0901	Showers	
0902	Heavy Showers	
0903	Rainshower	
1001	Occasional Showers	
1002	Scattered Showers	
1101	Isolated Showers	
1201	Light Showers	
1301	Freezing Rain	
1401	Rain	
1501	Drizzle	
1502	Light Rain	
1601	Fog	
1701	Mist	
1801	Smoke	

1901	Haze	
2001	Overcast	
2101	Sunny Intervals	
2102	No Rain	
2103	Clearing	
2201	Sunny Periods	
2202	Partly Cloudy	
2203	Partly Bright	
2204	Mild	
2301	Cloudy	
2302	Mostly Cloudy	
2401	Bright	
2402	Sunny	
2403	Fair	
2501	Fine	
2502	Clear	
2601	Windy	
2602	Squall	
2603	Stormy	
2604	Gale	
2701	Wet	
2702	Humid	
2801	Dry	
2901	Freezing	
3001	Frost	
3101	Hot	
3201	Cold	
3202	Chilly	
3301	Warm	
3401	Cool	
3501	Volcanic Ash	

WMO codes for present weather (ww) and their equivalent English wordings to be presented in the web site

ww	Equivalent English Wordings	Remarks
00	Fine	
01	Partly cloudy	
02		Not used
03	Cloudy	
04	Smoke	
05	Hazy	
06	Dust	
07	Dust	
08	Dust	
09	Duststorm	
10	Mist	
11	Fog	
12	Fog	
13	Thunderstorm	
14	Rain	
15	Rain	
16	Rain	
17	Thunder	
18	Squalls	
19		Not used
20	Drizzle	
21	Rain	
22	Snow	
23	Rain	
24	Drizzle	
25	Rain	
26	Snow	
27	Showers	
28	Fog	
29	Thunderstorm	
30	Duststorm	
31	Sandstorm	
32	Duststorm	
33	Severe duststorm	
34	Severe sandstorm	
35	Severe duststorm	
36	Moderate snow	
37	Heavy snow	
38	Moderate snow	

39	Heavy snow	
40	Fog	
41	Fog	
42	Fog	
43	Fog	
44	Fog	
45	Fog	
46	Fog	
47	Fog	
48	Fog	
49	Fog	
50	Light drizzle	
51	Light drizzle	
52	Moderate drizzle	
53	Moderate drizzle	
54	Dense drizzle	
55	Dense drizzle	
56	Light drizzle	
57	Dense drizzle	
58	Light rain	
59	Moderate rain	
60	Light rain	
61	Light rain	
62	Moderate rain	
63	Moderate rain	
64	Heavy rain	
65	Heavy rain	
66	Light rain	
67	Heavy rain	
68	Light rain	
69	Heavy rain	
70	Light snow	
71	Light snow	
72	Moderate snow	
73	Moderate snow	
74	Heavy snow	
75	Heavy snow	
76	Dust	
77	Snow	
78	Snow	
79	Snow	
80	Light showers	
81	Showers	

82	Heavy showers	
83	Light showers	
84	Showers	
85	Light snow	
86	Heavy snow	
87	Light snow	
88	Hail	
89	Hail	
90	Hail	
91	Light rain	
92	Heavy rain	
93	Light snow	
94	Heavy snow	
95	Thunderstorm	
96	Thunderstorm	
97	Severe thunderstorm	
98	Thunderstorm	
99	Severe thunderstorm	