

MEETING OF THE

Expert Team on WORLD DATA CENTRES  
(JMA, Tokyo, Japan, 21-23 January 2014)

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# Additional GAW Station Types

## Proposal

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	<b>In Preparation</b>	<b>Review</b>	<b>Approved</b>
Document status	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Version 0.1

# Document management

## Responsibilities

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## Version control

<b>Version</b>	<b>Authored by</b>	<b>Date</b>	<b>Reason for issue/Summary of change</b>
0.1	J. Klausen	2013-12-30	Document drafted

# Contents

Chapter 1	Background.....	4
Chapter 2	Additional Station Types.....	5
Chapter 3	Rationale.....	6

## Chapter 1 **Background**

Stations/platforms supporting the WMO GAW Programme are classified into 3 categories: Global, Regional, Contributing, according to the specifications in the Addendum to the GAW Strategic Plan: 2008-2015, Annex 2 (WMO, 2011).

This station classification is widely used also by the GAW World Data Centres and GAWSIS.

The 16<sup>th</sup> session of the Commission of Atmospheric Sciences (CAS-16) has taken note of the activities of the GAW Programme and has stated,

[CAS-16/Doc 6.2] 6.2.1.3 The Commission recognized that continuous long-term high-quality observations constitute the backbone of the GAW Programme. It noted that GAW coordinates global observations and analysis of data from 29 Global Stations, 424 fully operational Regional Stations, and about 18 stations operated by contributing networks. [...] The Commission noted that the criteria that must be met by a GAW Global, Regional or contributing station will be specified in the GAW technical regulations as part of WIGOS.

[CAS-16/Doc 6.2] 6.2.1.5 The Commission recognizes the value of the Essential Climate Variables ozone, greenhouse gases, and aerosol properties observed from civil commercial aircraft in advancing understanding and services for climate, weather, and environmental risk reduction. It urges Members to consider supporting proven and accepted efforts to implement observations of atmospheric composition and chemistry from commercial aircraft, using best practices such as those developed by the international research infrastructure programme of the European Union (IAGOS) and by the Japanese CONTRAIL programme of the National Institute for Environmental Studies and the JMA Meteorological Research Institute. The Commission further encouraged such efforts to seek to transmit data in real time.

[CAS-16/Doc 6.2] 6.2.1.7 Considering the importance of activities in urban areas, the Commission recommended to add a new category "local" to the GAW stations. These stations would provide important locally representative information to be used for many purposes, e.g., air quality studies and forecasting, health studies, and urban climate services. It is not the intention to capture existing urban network observations within GAW under this new "local" site designation, but rather to be able to include sites influenced by urban or industrial complexes.

[CAS-16/Doc 6.2] 6.2.1.8 The Commission agreed that GAW requires collaboration between different agencies, institutions and academia. The Commission appreciated the already established collaboration between WMO/GAW and other UN agencies and programmes, the International Global Atmospheric Chemistry (IGAC) project of the International Geosphere-Biosphere Programme (IGBP), with European Union programmes and projects. The Commission encouraged WMO/GAW to establish collaboration with environmental agencies worldwide to foster the urban issues. The Commission requested also for collaboration to be taken up with the relevant communities addressing ocean acidification.

## Chapter 2    **Additional Station Types**

Considering that,

CAS-16 recognizes the three existing GAW station types, namely “**Global**”, “**Regional**” and “**Contributing**”,

Considering that,

CAS-16 recommends the addition of a new GAW station type, namely “**Local**”, to be able to include important locally representative information,

Considering that,

CAS-16 urges Members to consider supporting proven and accepted efforts to implement observations of atmospheric composition and chemistry from commercial aircraft, and requested also for collaboration to be taken up with the relevant communities addressing ocean acidification.

*ET-WDC recommends that OPAG EPAC SSC support the addition of another new GAW station type, namely “**Mobile**”, to be able to manage through the GAW data management infrastructure important information originating from such platforms as ships, aircraft, buoys, trains, moving vehicles, etc. The acceptance of a “**Mobile**” station/platform shall be based on the same procedures as are applicable to all the other station types.*

## Chapter 3 **Rationale**

Two of the three existing GAW station types, namely “Global” and “Regional”, as well as the new station category “Local” hint at the representativeness of observations made at these [fixed] stations.

The third existing station type, “Contributing” does not imply a certain representativeness of the observations, but rather indicates that a specific station/platform contributes to GAW, either as an individual station/platform, or as part of a specific contributing network. Contributing networks are designated to be part of GAW by mutual exchange of a Letter of Agreement between WMO and the network coordinator(s).

All of the above station types are designations of “fixed” stations/platforms.

The proposed station type “Mobile” encompasses all stations/platforms, except satellites, that move around in space while making observations. Some data of a few such platforms are already being collected by WDCGG. By officially classifying such stations/platforms as “Mobile [GAW stations]”, they can be treated and recognized much like the other types. This will allow GAW to establish Letters of Agreement with programs such as IAGOS or CONTRAIL, or the VOS, and to include their data both in the WDCs and in GAWSIS, thereby giving such stations/platforms the visibility they deserve and the official recognition as important contributors to GAW. It will help underline the mandate of GAW to go beyond ground-based networks and to be recognized as coordinating atmospheric observations in all three dimensions.