

List of suggested tasks for updated Terms of Reference for the TTLOCA

1. Lightning data for climate applications
 - Develop and propose a data format including metadata for lightning data for climate applications. It should on the one side provide sufficient information on lightning strokes including the uncertainty and on the other side not include individual station data so also private data providers are able to provide data
 - Review temporal and spatial ECV requirements if they suffice for climate applications (daily against hourly)
 - Organize funding for a research position to prepare an exemplary dataset integrating different types of data (satellite, RF). The goal is to integrate data of different spatial and temporal coverage and different sensors (RF, optical).
 - Explore the possibility to establish an integrated lightning data portal in collaboration with GEO

2. Thunder Day Database (TDD)
 - Continue efforts to include the TDD to the WMO Information System (WIS) and subsequently request members to complement database
 - Explore the possibility to establish an integrated lightning database with NOAA or NASA that could also encompass the TDD

3. Establish approach to identify more reliable numbers for lightning fatalities and injuries and connect with WMO/WHO working group to explore if education material etc. could be developed jointly.

4. Collaboration with GRUAN to hold field campaign to measure ionospheric potential once sensors are available

5. Liaise with other interested expert groups within WMO to ensure full consistency for applications areas for lightning (e.g. registration of private lightning data providers at the WIS; metadata for real-time lightning applications)

List of suggested members

Name	Affiliation	Expertise
Robert Holzworth	University of Washington, Director of the WWLLN, USA	Ground based lightning monitoring, network and data management
Yuri Kuleshov	RMIT University Melbourne, Australia	Lightning climatologies, MetService
Earle Williams,	MIT, USA	Thunder days, climate aspect of

		lightning, global circuit
Colin Price	Tel Aviv University, Israel	Ground monitoring, new technologies, climate aspect of lightning, global circuit, GRUAN
Steven Goodman	NASA/NOAA, USA	Satellite lightning expert

Potential new members:

Bartolomeo Viticchie	EUMETSAT	Project Scientist for MTG Lightning Imager
Mary Ann Cooper	ACLENET (Macoopermd@gmail.com)	Lightning fatalities and injuries
Vassiliki Kotroni	Research Director Institute of Environmental Research National Observatory of Athens, Greece	Lightning climatology
Carlos Morales	University Sao Paulo	Operates the StarNet VLF lightning network for South America, harmonizing with UK Met Office ATDNet