

# Historical Overview of WMO Activities in Agrometeorology

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World Meteorological Organization (WMO)**

3 May 2025

# Early Days (pre-WMO)

- **In 1873** the International Meteorological Organization (IMO) was created.
- **In 1913**, IMO Commission for Agricultural Meteorology was established, although its first meeting could not be held until 1923 owing to the First World War.
- Subsequently, this commission held seven meetings, with the last one being held in Toronto in 1947.

# Establishment of United Nations & WMO

- After the Second World War, the United Nations was formed and the World Meteorological Organization (WMO) was created on 23 March 1950 as a specialized agency of the United Nations and the successor to IMO.
- Therefore, WMO inherited more than 75 years of practical experience in international cooperation in meteorology and its various applications to human activities, including agriculture.
- Soon after the creation of WMO, the WMO Commission for Agricultural Meteorology (CAgM) was created and its first session held in Paris in November 1953. From its inception until today, CAgM has organized 16 sessions.

# Participants in the first session of CAgM held in Paris in November 1953



# CAGM Sessions (1953-2018)

| CAGM Session | Year | Venue          | Final Report (WMO-No.) |
|--------------|------|----------------|------------------------|
| I            | 1953 | Paris          | 27                     |
| II           | 1958 | Warsaw         | 83                     |
| III          | 1962 | Toronto        | 125                    |
| IV           | 1967 | Quezon City    | 221                    |
| V            | 1971 | Geneva         | 318                    |
| VI           | 1974 | Washington, DC | 402                    |
| VII          | 1979 | Sofia          | 546                    |
| VIII         | 1983 | Geneva         | 612                    |
| IX           | 1986 | Madrid         | 677                    |
| X            | 1991 | Florence       | 775                    |

| CAGM Session | Year | Venue          | Final Report (WMO-No.) |
|--------------|------|----------------|------------------------|
| XI           | 1996 | Hanava         | 825                    |
| XII          | 1999 | Accra          | 900                    |
| XIII         | 2002 | Ljubljana      | 951                    |
| XVI          | 2006 | New Dehli      | 1014                   |
| XV           | 2010 | Belo Horizonte | 1062                   |
| XVI          | 2014 | Antalya        | 1134                   |
| XVII         | 2018 | Incheon        | 1217                   |

# CAGM Presidents & Secretariat

| CAGM Session | Year | President                 | Vice-President             | WMO Secretariat  |
|--------------|------|---------------------------|----------------------------|--|
| I            | 1953 | J. J. Burgos (Argentina)  | H. Geslin (France)         | J. M. Rubiato  |
| II           | 1958 | J. J. Burgos (Argentina)  | H. Geslin (France)         | O. M. Ashford,<br>M. A. Alaka  |
| III          | 1962 | P. M. A. Bourke (Ireland) | M. S. Malik (USSR)         | K. Langlo,<br>B. Thorslund   |
| IV           | 1967 | L. P. Smith (UK)          | J. J. Tecson (Philippines) | O. M. Ashford,<br>M. L. Blanc  |
| V            | 1971 | L. P. Smith (UK)          | J. van Eimern (Germany)    | C. C. Wallen,<br>C. M. Taylor  |
| VI           | 1974 | W. Baier (Canada)         | J. Lomas (Israel)          | C. C. Wallen,<br>M. J. Maunder,<br>V. Krishnamurthy                    |
| VII          | 1979 | W. Baier (Canada)         | J. Lomas (Israel)          | R. Schneider,<br>M. J. Connaughton,<br>E. G. Davy,<br>V. Krishnamurthy |

# CAGM Presidents & Secretariat

| CAGM Session | Year | President                   | Vice-President              | WMO Secretariat  |
|--------------|------|-----------------------------|-----------------------------|--|
| VIII         | 1983 | N. Gerbier (France)         | J. J. Burgos (Argentina)    | D. Rijks,<br>V. Krishnamurthy, N. A.<br>Gbeckor-Kove     |
| IX           | 1986 | A. Kassar (Tunisia)         | C. J. Stigter (Netherlands) | D. Rijks,<br>V. Krishnamurthy                            |
| X            | 1991 | A. Kassar (Tunisia)         | C. J. Stigter (Netherlands) | N. A. Gbeckor-Kove,<br>V. Krishnamurthy                  |
| XI           | 1996 | C. J. Stigter (Netherlands) | J. Salinger (New Zealand)   | N. A. Gbeckor-Kove,<br>V. Krishnamurthy<br>A. Yeves-Ruiz |
| XII          | 1999 | C. J. Stigter (Netherlands) | J. Salinger (New Zealand)   | M. V. K. Sivakumar,<br>A. Yeves-Ruiz                     |
| XIII         | 2002 | R. Motha (USA)              | L. Akeh (Nigeria)           | M. V. K. Sivakumar,<br>M. Saho,<br>R. Stefanski          |
| XIV          | 2006 | R. Motha (USA)              | L. Akeh (Nigeria)           | M. V. K. Sivakumar,<br>R. Stefanski                      |

# CAGM Presidents & Secretariat

| CAGM Session                 | Year          | President                 | Vice-President                                     | WMO Secretariat                     |
|------------------------------|---------------|---------------------------|--|-------------------------------------|
| <b>XV</b>                    | 2010          | J. Salinger (New Zealand) | L.S. Rathore (India)                               | M. V. K. Sivakumar,<br>R. Stefanski |
| <b>XVI</b>                   | 2014          | B. Lee (South Korea)      | F. Rossi (Italy)                                   | R. Stefanski<br>J. Camacho          |
| <b>XVII</b>                  | 2018          | B. Lee (South Korea)      | F. Rossi (Italy)                                   | R. Stefanski<br>J. Camacho          |
| <b>Transition</b>            | 2018-<br>2020 | R. Stone (Australia)      | O. Brunini (Brazil)                                | R. Stefanski<br>J. Camacho          |
| <b>SERCOM - 1<br/>SC-AGR</b> | 2020/1        | R. Stone (Australia)      | E. Mateescu (Romania)                              | R. Stefanski<br>J. Camacho          |
| <b>SERCOM - 2<br/>SC-AGR</b> | 2024          | J. Ijampy (Nigeria)       | E. Mateescu (Romania)<br>Y. Everingham (Australia) | R. Stefanski<br>S. Grey             |



# Five International Workshops

- Climate Prediction and Agriculture (CLIMAG) (Geneva; Sept 1999).
- Coping with Drought in sub-Saharan Africa: Best Use of Climate Information (Kadoma, Zimbabwe; October 1999)
- Automated Weather Stations for Applications in Agriculture and Water Resources Management (Lincoln, NE. USA; Mar 2000).
- Carbon Sequestration, Sustainable Agriculture and Poverty Alleviation (Geneva; 30 Aug – 1 Sep 2000).
- Reducing the Vulnerability of Agriculture and Forestry to Climate Variability and Climate Change (Ljubljana, Slovenia; 7-9 October 2002)

# Five Expert Group Meetings

- RA III/IV Meeting on Extreme Events (Caracas, Venezuela; July 1999).
- Early-Warning Systems for Drought Preparedness and Drought Management (Lisbon, Portugal; Sept 2000).
- Software for Agroclimatic Data Management (Washington, D.C. USA; Oct 2000).
- Internet Applications for Agrometeorological Products (Washington, D.C. USA; May 2002).
- RA I Meeting On The Implementation Of Climate Forecasts For Agriculture (Banjul, Gambia; Dec 2002).

# Nine Roving Seminars

- Crop Yield Modeling (Pune, India; July, 1999 and Ljubljana, Slovenia; Sept. 1999).
- Data Management (Tashkent, Uzbekistan; Nov. 1999 and Pretoria, South Africa; June 2000).
- GIS and Agroecological Zoning (Kuala Lumpur, Malaysia, May 2000).
- Automated Weather Stations (Morocco; July 1999 and Islamic Republic of Iran; Nov. 1999).
- Drought Management (Accra, Ghana; Nov. 1999 and Beijing, China; May 2001).

# CAGM Output (1999-2002)

- Technical Notes: 2
- CAGM Reports: 13
- AGM Report: 1
- Training Manuals: 4
- Brochures: 2
- CD-Roms: 3
- Proceedings: 8

INTERNATIONAL



SECRETARIAT

CLIMATE PREDICTION  
AGRICULTURE



International START Secretariat  
Washington, DC, USA



PUBLICATIONS OF THE  
COMMISSION FOR  
AGRICULTURAL METEOROLOGY  
1954 - 1999



Volume 2  
TECHNICAL NOTES, CAgM REPORTS, BRO



United States  
Department of  
Agriculture

Office of the  
Chief Economist



World  
Meteorological  
Organization

Agricultural  
Meteorology  
Division

# Software for Agroclimatic Data Management

Proceedings of an Expert Group Meeting  
October 16-20, 2000  
Washington, D.C., USA



2008-2014

**350** SEMINARS

WERE ORGANIZED IN **17** COUNTRIES

**13500** FARMERS

WERE TRAINED IN **4500** VILLAGES

Funded by Spain  
and Norway





# World AgroMeteorological Information Service



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## [Regions](#)

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## [Related Web Sites](#)

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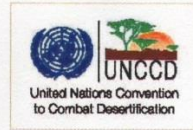
## [Mirror Servers](#)

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## Products Available For:

|                                     |   |
|-------------------------------------|---|
| <a href="#">ACMAD</a>               | <a href="#">Italy</a>                         |
| <a href="#">Albania</a>             | <a href="#">Jamaica</a>                       |
| <a href="#">Antigua and Barbuda</a> | <a href="#">Kenya</a>                         |
| <a href="#">Argentina</a>           | <a href="#">Lesotho</a>                       |
| <a href="#">Australia (2)</a>       | <a href="#">Malawi</a>                        |
| <a href="#">Bangladesh</a>          | <a href="#">Malaysia</a>                      |
| <a href="#">Belgium</a>             | <a href="#">Mali</a>                          |
| <a href="#">Belize</a>              | <a href="#">Mexico</a>                        |
| <a href="#">Brazil (2)</a>          | <a href="#">Moldova</a>                       |
| <a href="#">Burkina Faso</a>        | <a href="#">New Zealand</a>                   |
| <a href="#">Bulgaria</a>            | <a href="#">Niger</a>                         |
| <a href="#">Canada</a>              | <a href="#">Nigeria</a>                       |
| <a href="#">Caribbean</a>           | <a href="#">Pakistan</a>                      |
| <a href="#">Chile (2)</a>           | <a href="#">Peru</a>                          |
| <a href="#">China (2)</a>           | <a href="#">Philippines</a>                   |
| <a href="#">Colombia</a>            | <a href="#">Portugal</a>                      |
| <a href="#">Côte d'Ivoire</a>       | <a href="#">SADC</a>                          |
| <a href="#">Croatia</a>             | <a href="#">Serbia</a>                        |
| <a href="#">Cuba</a>                | <a href="#">Slovakia</a>                      |
| <a href="#">Dominican Republic</a>  | <a href="#">Slovenia</a>                      |
| <a href="#">DMCSEE</a>              | <a href="#">South Africa (3)</a>              |
| <a href="#">Ecuador</a>             | <a href="#">South Pacific</a>                 |
| <a href="#">El Salvador</a>         | <a href="#">South Korea (3)</a>               |
| <a href="#">Ethiopia</a>            | <a href="#">Spain</a>                         |
| <a href="#">EU-MARS</a>             | <a href="#">St Vincent and the Grenadines</a> |
| <a href="#">Fiji</a>                | <a href="#">Swaziland</a>                     |
| <a href="#">Gambia</a>              | <a href="#">Tanzania</a>                      |
| <a href="#">Germany</a>             | <a href="#">Turkey</a>                        |
| <a href="#">Greece</a>              | <a href="#">Uruguay</a>                       |
| <a href="#">India</a>               | <a href="#">USA (2)</a>                       |





# HIGH-LEVEL MEETING ON NATIONAL DROUGHT POLICY

**(HMNDP)**  
TOWARDS MORE DROUGHT RESILIENT SOCIETIES

**11-15 March 2013**  
**CICG, Geneva**

**Final Report**





# IDMP: 10 Years of Integrated Drought Management

## IDMP promotes the Three Pillars of Integrated Drought Management

### PILLAR 1

MONITORING AND  
EARLY WARNING



### PILLAR 2

RISK AND IMPACT  
ASSESSMENT



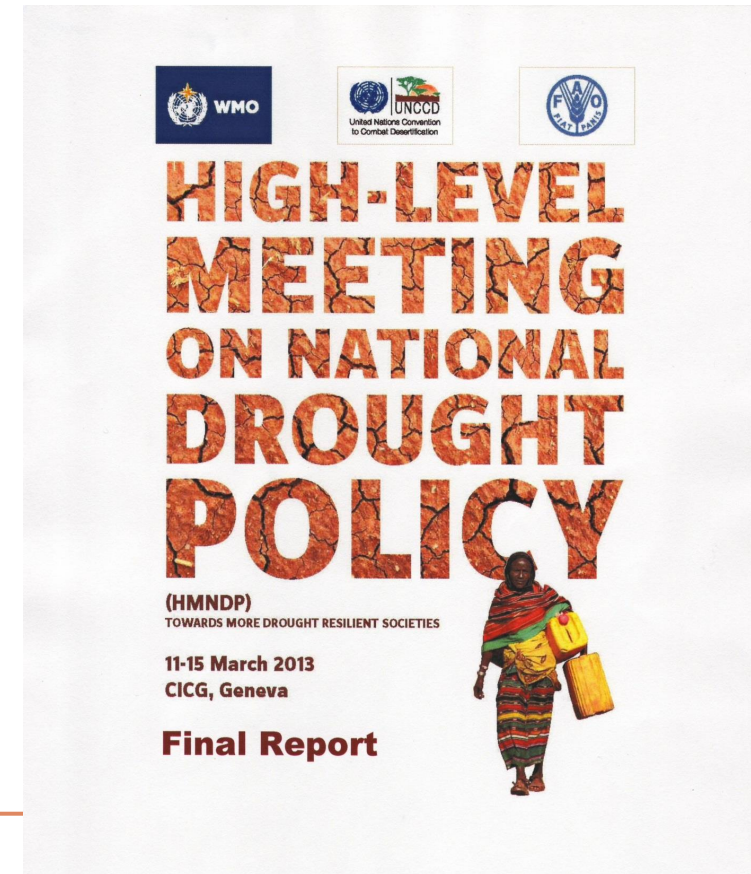
### PILLAR 3

RISK MITIGATION,  
PREPAREDNESS  
AND RESPONSE



PROACTIVE  
DISASTER  
MANAGEMENT

Established in  
2013 at High-  
Level Meeting on  
National Drought  
Policy



# Drought Resilience +10 Conference

30 Sep – 2 Oct 2024 Geneva



- There were about **1,000 participants from 158 countries**
  - **275 attending in person from 101 countries,**
  - **over 730 joined virtually from 144 countries.**
  - There were **9 workstreams, 25 side events, and 77 posters.**

Conference Conclusions  
and Recommendations

Scan QR code



# Drought Resilience +10 Conference

30 Sep – 2 Oct 2024 Geneva



## Key Takeaways

- We need integrated, proactive, and perspective drought management to cope with drought.
- Cross-sectoral and whole-of-society approaches must be integrated into national drought policies.
- Strengthening data-sharing and monitoring systems is crucial.
- Drought action is central to sustainable development, climate adaptation and Early Warnings for All.
- There is a critical need to mobilize resources and strengthen political will for drought resilience.

Conference Conclusions  
and Recommendations

Scan QR code



# Guide to Agricultural Meteorological Practices

Guide to  
Agricultural Meteorological Practices



## 2010: Book format

- Published in 2010 (WMO No.134)
- 17 chapters
- Not easily updated
- Not easy to add new knowledge like case studies

## Current: Updates

- Chapter by Chapter updates
- Integrating new knowledge and emerging challenges
- Various activities/ outputs feeding into chapter updates
- Focus on the user (practitioner, extension agent, researcher, farmer)

## 2024-27: Digital

- Web-based
- Agile and easily updated
- Easy to add new case studies or learning resources (in written, video or audio format)
- Link to revamped WAMIS
- See FAO CSA Sourcebook as an example (changed from book format to digital in 2017)

Examples of Chapters: CHAPTER 5. WEATHER AND CLIMATE FORECASTS FOR AGRICULTURE

CHAPTER 7. CLIMATE & WEATHER RISK ASSESSMENT FOR AGRICULTURE



WMO No. 134

Weather • Climate

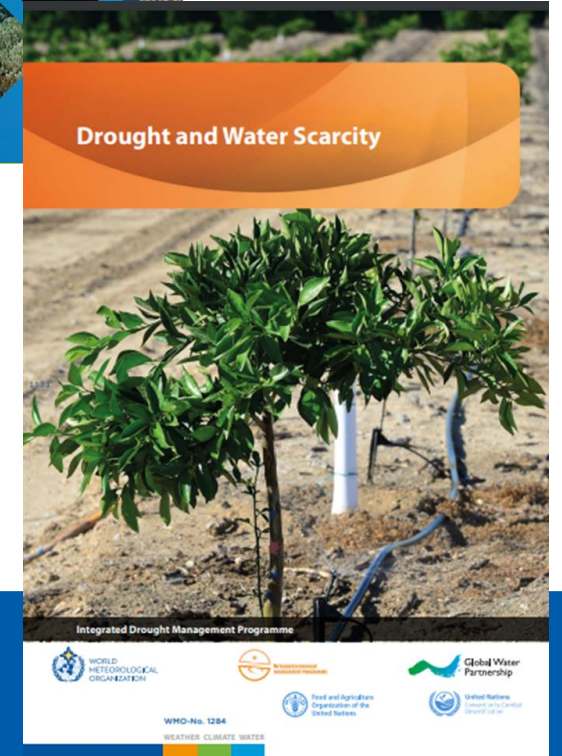
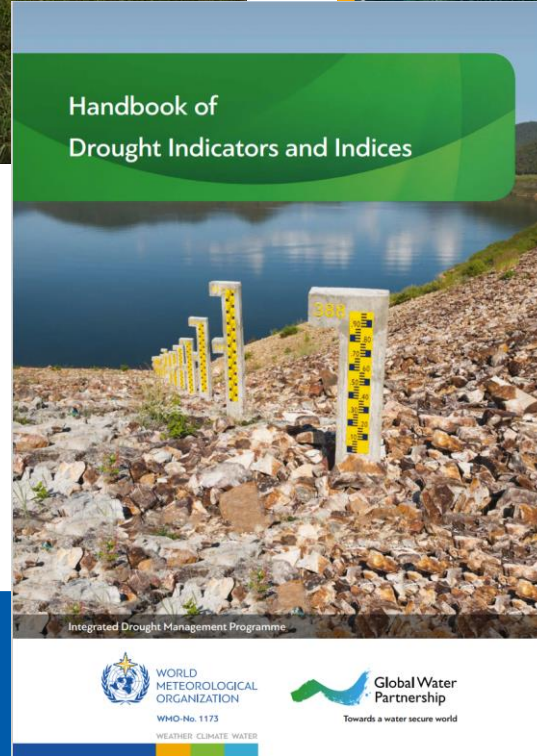
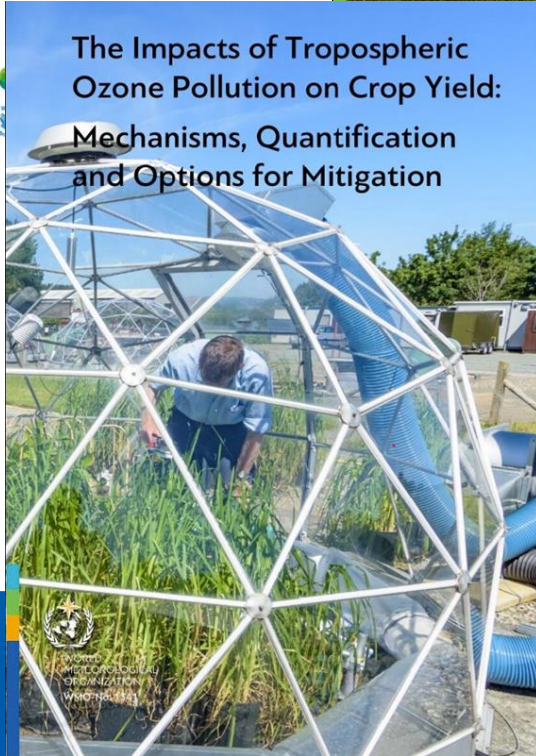
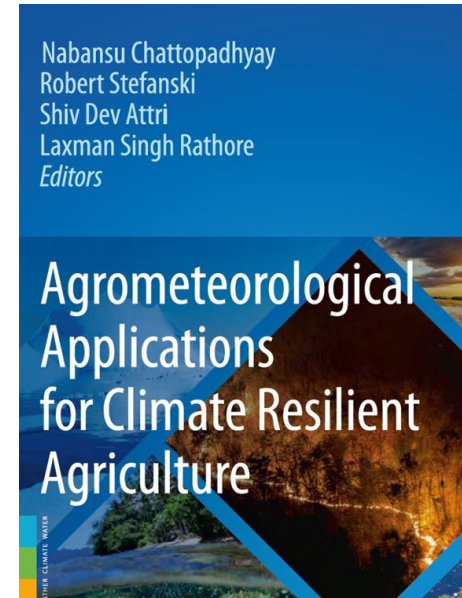
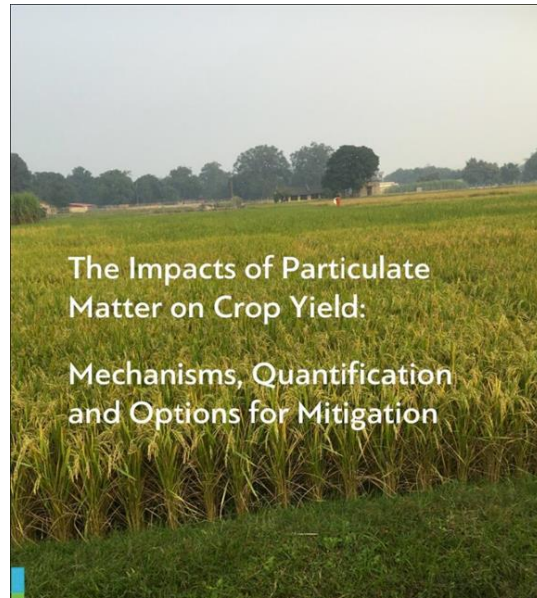
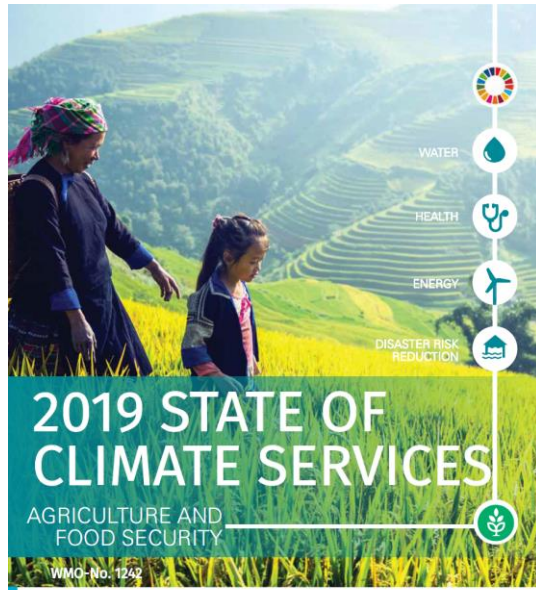


WORLD  
METEOROLOGICAL  
ORGANIZATION



1950-2025  
SCIENCE for ACTION

# Publications





> Water and Climate Communities >

# Agricultural Meteorology

REQUEST SENT ▼

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Stream

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Discussions

Opportunities

Members

<https://waterclimatecommunities.info/group/76/stream>

# Thank you.