CASE STUDIES FOR THE ARCHITECTURE FOR CLIMATE MONITORING FROM SPACE

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Contents

I. Cg-18 Climate Architecture Resolution
II. Climate Architecture Case Studies
I. Cg-18 Climate Architecture Resolution
WMO Resolution 19 (Cg-XVI) of 2011, requested WMO to

- “to develop an architecture ... for climate monitoring as a component of the future WIGOS and GFCS, for consideration by Congress”,

- as a “major initiative of the WMO Space Programme”, and

- “in coordination with satellite operators, CEOS, CGMS, GCOS, GEO and WCRP”.

Background
Resolution 51(Cg-18)

- Developed during WMO Workshop February 2019
- Reviewed by WGClimate-10
- Acknowledged by CEOS-SIT-34
- Acknowledged by CGMS-47
- Endorsed by Cg-18 in June 2019

Resolution 51 (Cg-18)
“Implementation of the architecture for climate monitoring from space”
II. Climate Architecture

Case Studies
In 2015, WMO with GFCS and EC published a report on “Satellites for Climate Services – Case Studies for Establishing an Architecture for Climate Monitoring from Space”

WMO-No. 1162
To demonstrate the direct or indirect value of Earth observation satellites for climate services

Contents
- Executive summary
- Introduction and context
- 13 case studies
- Concluding findings and remarks
- Appendix
2015 Report – Case Studies

- Case Study Structure
  - Structured Summary
  - Information Flow (based on climate architecture logical view)
  - Description

- Typical length: 3-6 Pages
## 2015 Report – Structured Summary

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<tr>
<td>1.</td>
<td>Title</td>
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<tr>
<td>2.</td>
<td>Service</td>
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<td>3.</td>
<td>End users</td>
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<td>4.</td>
<td>Intermediate users</td>
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<td>5.</td>
<td>Application(s)</td>
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<td>6.</td>
<td>Models used</td>
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<td>7.</td>
<td>Climate data records used</td>
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<td>8.</td>
<td>Satellite observations used</td>
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<td>9.</td>
<td>Agencies that produce records</td>
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<tr>
<td>10.</td>
<td>Sustainability of Service (demonstration or ongoing)</td>
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WGClimate-10 Discussions

- “The discussion was focused on the provision of further case studies on the usage of climate data records in applications to further promote the architecture for climate monitoring from space.”

- “The analysis shall keep the same style as in the 2015 WMO report (Bojinski et al.).”

- “WGClimate #11 will carefully review the proposed case studies and decides which will be included in the report.”
Relevant WGClimate-10 Actions

- **WGClimate10-12**: Confirmation of availability of resources within WMO to lead and publish a report on case studies illustrating the use of climate data records in climate applications (Werner)

- **WGClimate10-13**: Pre-selection of case studies to be part of the case studies report (Simon Pinnock, Selma Cherchali, EC, All)
WMO is ready – in cooperation with other relevant entities – to lead the development and publication of the proposed report.

GFCS is supportive of the initiative and will be happy to publicize the report through its network and have its logo on it.

GFCS is not in a position to provide human or financial resources, but could help identify cases in Latin America and the Caribbean and possibly in the Pacific and could review other case studies.
Status as of WGClimate-11

- GCOS is ready to support the initiative as case studies like this support the use and development of ECV.
- However, resources are very limited in GCOS at present and there is no possibility for financial support for this in the near term.
- GCOS should be able to help with staff time for editing and can suggest case studies and points of contact for them.
Identification of Contributors

- With their logos
  - GFCS (case studies and review)
  - GCOS (case studies and review)
  - EC (confirm)
  - Others?
- Branding?
- Other support?
Identification of Possible Case Studies

- Shall we revisit 2015 Case Studies?
- Possible new Case Studies:
  - Proposed by GFCS
  - Proposed by GCOS
  - Case studies by ESA, NASA, Climate Observatory, EC and others
  - NOAA Case Studies
  - CM-SAF Case Studies
  - SEMDP (preliminary only)
  - Annual WMO State of the Climate and other products to inform policy- and decision makers
Do we need to revise the overall 2015 Report structure?

Introduction:
- Evolution of the climate architecture
- Reference to Cg-18 resolution, WIGOS 2040
- Updates on relevant GCOS, GFCS, CEOS activities
- Role of WGClimate and ECV Inventory

Do we need to revise the case studies structure?

Other?
# Proposed Timeline

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<th>Activity</th>
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| 4-6 September 2019       | • Coordinate with WGClimate/decision to go ahead  
                           | • Establish editorial/reviewing board (EC, ESA, GCOS, GFCS, ...)  
                           | • Identify possible case studies and lead authors                                                                                      |
| October 2019             | • Develop case study template                                                                                                           |
| October/November 2019    | • Confirm case studies and lead authors  
                           | • Provide case study template                                                                                                           |
| Mid-January 2020         | • Deadline for submission of written case study drafts by lead authors                                                                 |
| Mid-March 2020           | • Review of case studies by the editorial/reviewing board  
                           | • Review of draft publication by WGClimate-12                                                                                           |
| End March 2020           | • Compile/final editing of publication by WMO                                                                                           |
| April 2020               | • Publication (as .pdf and, funds permitting, in print)                                                                                   |
| Jun 2020                 | • Presentation at CM-15 and EC-72                                                                                                         |
Thank you

http://www.wmo.int/sat