

**WGCV evaluation of RADARSAT Constellation Mission (RCM) 16m StripMap  
[NRB] self-assessment submitted by NRCan (SAR (NRB) PFS v1.1) for CEOS-  
ARD compliance**

|            |                          |                                               | Threshold            | Goal         |
|------------|--------------------------|-----------------------------------------------|----------------------|--------------|
| <b>1</b>   | <b>CEOS-ARD product</b>  | <b>General Metadata</b>                       |                      |              |
| 1.1        | [ALL]                    | Traceability                                  | Not Required         | Not Assessed |
| 1.2        | [ALL]                    | Metadata Machine Readability                  | Verified             | Not Assessed |
| 1.3        | [ALL]                    | Product Type                                  | Verified             | Not Assessed |
| 1.4        | [ALL]                    | Document Identifier                           | Verified             | Not Assessed |
| 1.5        | [ALL]                    | Data Collection Time                          | Verified             | Not Assessed |
| <b>1.6</b> |                          | <b>Source Data Attributes</b>                 |                      |              |
| 1.6.1      | [ALL]                    | Source Data Access                            | Verified             | Not Assessed |
| 1.6.2      | [ALL]                    | Instrument                                    | Verified             | Not Assessed |
| 1.6.3      | [ALL]                    | Source Data Acquisition Time                  | Verified             | Not Assessed |
| 1.6.4      | [ALL]                    | Source Data Acquisition Parameters            | Verified             | Not Assessed |
| 1.6.5      | [ALL]                    | Source Data Orbit Information                 | Verified             | Not Assessed |
| 1.6.6      | [ALL]                    | Source Data Processing Parameters             | Verified             | Not Assessed |
| 1.6.7      | [ALL]                    | Source Data Image Attributes                  | Verified             | Not Assessed |
| 1.6.8      | [ALL]                    | Sensor Calibration                            | Not Required         | Not Assessed |
| 1.6.9      | [ALL]                    | Performance Indicators                        | Verified             | Not Assessed |
| 1.6.10     | [ALL]                    | Source Data Polarimetric Calibration Matrices | Not Required         | Not Assessed |
| 1.6.11     | [ALL]                    | Mean Faraday Rotation Angle                   | Not Required         | Not Assessed |
| 1.6.12     | [ALL]                    | Ionosphere indicator                          | Not Required         | Not Assessed |
| <b>1.7</b> |                          | <b>CEOS-ARD Product Attributes</b>            |                      |              |
| 1.7.1      | [ALL]                    | Product Data Access                           | Verified             | Not Assessed |
| 1.7.2      | [ALL]                    | Auxiliary Data                                | Not Required         | Not Assessed |
| 1.7.3      | [ALL]                    | Product Sample Spacing                        | Verified             | Not Assessed |
| 1.7.4      | [NRB]<br>[POL]<br>[ORB]  | Product Equivalent Number of Looks            | Not Required         | Not Assessed |
| 1.7.5      | [ALL]                    | Product Resolution                            | Not Required         | Not Assessed |
| 1.7.6      | [NRB]<br>[POL]<br>[ORB]  | Product Filtering                             | Verified             | Not Assessed |
| 1.7.7      | [ALL]                    | Product Bounding Box                          | Verified             | Not Assessed |
| 1.7.8      | [ALL]                    | Product Geographical Extent                   | Verified             | Not Assessed |
| 1.7.9      | [ALL]                    | Product Image Size                            | Verified             | Not Assessed |
| 1.7.10     | [ALL]                    | Product Pixel Coordinate Convention           | Verified             | Not Assessed |
| 1.7.11     | [ALL]                    | Product Coordinate Reference System           | Verified             | Not Assessed |
| 1.7.12     | [ORB]                    | Look Direction Polynomials                    | Not Product Relevant | Not Relevant |
| 1.7.13     | [GSLC]                   | Radar Unit Look Vector                        | Not Product Relevant | Not Relevant |
| 1.7.14     | [GSLC]                   | Slant Range Sensor to Surface                 | Not Product Relevant | Not Relevant |
| 1.7.15     | [NRB]<br>[POL]<br>[GSLC] | Reference Orbit                               | Not Required         | Not Assessed |

|          |                          |                                               | Threshold            | Goal         |
|----------|--------------------------|-----------------------------------------------|----------------------|--------------|
| <b>2</b> | <b>CEOS-ARD product</b>  | <b>Per-Pixel Metadata</b>                     |                      |              |
| 2.1      | [ALL]                    | Metadata Machine Readability                  | Verified             | Not Assessed |
| 2.2      | [ALL]                    | Data Mask Image                               | Verified             | Not Assessed |
| 2.3      | [ALL]                    | Scattering Area Image                         | Not Required         | Not Assessed |
| 2.4      | [ALL]                    | Local Incident Angle Image                    | Verified             | Not Assessed |
| 2.5      | [ALL]                    | Ellipsoidal Incident Angle Image              | Not Required         | Not Assessed |
| 2.6      | [ALL]                    | Noise Power Image                             | Not Required         | Not Assessed |
| 2.7      | [NRB]<br>[POL]<br>[GSLC] | Gamma-to-Sigma Ratio Image                    | Not Required         | Not Assessed |
| 2.8      | [ALL]                    | Acquisition ID Image                          | Not Required         | Not Assessed |
| 2.9      | [NRB]<br>[POL]<br>[GSLC] | Per-pixel DEM                                 | Not Required         | Not Assessed |
| 2.10     | [ORB]                    | Per-pixel Geoid                               | Not Product Relevant | Not Relevant |
| 2.11     | [ORB]                    | Look Direction Image                          | Not Product Relevant | Not Relevant |
| 2.12     | [GSLC]                   | Radar Unit Look Vector Grid Image             | Not Product Relevant | Not Relevant |
| 2.13     | [GSLC]                   | Slant Range Sensor to Surface Image           | Not Product Relevant | Not Relevant |
| 2.14     | [GSLC]                   | InSAR Phase Uncertainty Image                 | Not Product Relevant | Not Relevant |
| 2.15     | [GSLC]                   | Atmospheric Phase Correction Image            | Not Product Relevant | Not Relevant |
| 2.16     | [GSLC]                   | Ionospheric Phase Correction Image            | Not Product Relevant | Not Relevant |
|          |                          |                                               | <b>Threshold</b>     | <b>Goal</b>  |
| <b>3</b> | <b>CEOS-ARD product</b>  | <b>Radiometrically Corrected Measurements</b> |                      |              |
| 3.1      | [ALL]                    | Backscatter Measurements                      | Verified             | Not Assessed |
| 3.2      | [ALL]                    | Scaling Conversion                            | Verified             | Not Assessed |
| 3.3      | [ALL]                    | Noise Removal                                 | Verified             | Not Assessed |
| 3.4      | [NRB]<br>[POL]<br>[GSLC] | Radiometric Terrain Correction Algorithms     | Verified             | Not Assessed |
| 3.5      | [ALL]                    | Radiometric Accuracy                          | Not Required         | Not Assessed |
| 3.6      | [ORB]                    | Mean Wind-Normalised Backscatter Measurements | Not Product Relevant | Not Relevant |
| 3.7      | [NRB]<br>[POL]           | Flattened Phase                               | Not Required         | Not Assessed |
|          |                          |                                               | <b>Threshold</b>     | <b>Goal</b>  |
| <b>4</b> | <b>CEOS-ARD product</b>  | <b>Geometric Corrections</b>                  |                      |              |
| 4.1      | [ALL]                    | Geometric Correction Algorithms               | Not Required         | Not Assessed |
| 4.2      | [ALL]                    | Digital Elevation Model                       | Verified             | Not Assessed |
| 4.3      | [ALL]                    | Geometric Accuracy                            | Verified             | Not Assessed |
| 4.4      | [ALL]                    | Geometric Refined Accuracy                    | Not Required         | Not Assessed |
| 4.5      | [ALL]                    | Gridding Convention                           | Verified             | Not Assessed |

## CEOS-ARD Evaluation Outcome: (SAR PFS v1.1)

|                  |                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Type:    | Normalised Radar Backscatter (NRB)                                                                                                                                                                                                                                                                                                                                |
| Threshold level: | <p>Compliance verified for 30 PFS metadata items at Threshold level by WGCV PoC through 1-on-1 discussions and clarifications with NRCan representatives (Hugo Drouin).</p> <p><i>The RADARSAT Constellation Mission (RCM) 16m StripMap NRB (HH, HV, VH, VV, HH/HV, VH/VV, HH/VV, HH/HV/VH/VV, CH/CV) Products are CEOS-ARD compliant at Threshold level.</i></p> |
| Goal level:      | No Assessment                                                                                                                                                                                                                                                                                                                                                     |