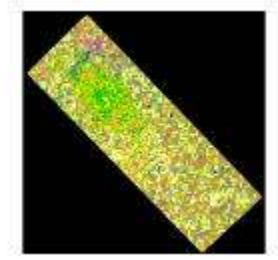


SMAPVEX_2012_Crop_Map

File Geodatabase Raster Dataset



Tags

SMAPVEX12, crop map, landcover, environment, geoscientificInformation

Summary

This dataset was generated for use in mapping, analysis and validation associated with the SMAPVEX12 (Soil Moisture Active-Passive Validation Experiment 2012) project.

Description

This dataset displays a detailed crop map across the SMAPVEX12 study area.

Earth Observation data

Spot Imagery

No.	Sensor	Date	Spectral Res.	Spatial Res. (m)
1	SPOT 4	2012/06/23	Green, Red, NIR, SWIR	20
2	SPOT 4	2012/06/28	Green, Red, NIR, SWIR	20
3	SPOT 4	2012/07/14	Green, Red, NIR, SWIR	20

DMCii Imagery

No.	Sensor	Date	Spectral Res.	Spatial Res. (m)
1	SLIM-6	2012/08/14	Green, Red, NIR	22

Radarsat-2 Imagery

No.	Beam Mode	Date	Spectral Res.	Spatial Res. (m)
1	Wide Dual 2	2012/08/13	HH and HV	30

Geographic Projection Information

- Pixel size: 20m, (Geometric RMSE: less than one pixel)

- Datum: North American Datum of 1983 (NAD83)
- Projection System: Universal Transfer Mercator (UTM) zone 14 North

Preprocessing and Classification

Science and Technology Branch, Agriculture and Agri-food of Canada, Ottawa

(Contact: Saeid Homayouni and Thierry Fiset)

Landcover/Crop Class definition

No.	Class Code	Class Name	No.	Class Code	Class Name
1	0	Unclassified	14	146	Wheat
2	20	Water	15	147	Corn
3	30	Barren	16	153	Canola/Rapeseed
4	34	Urban	17	154	Flaxseed
5	50	Shrubland	18	157	Sunflowers
6	80	Wetland	19	158	Soybeans
7	110	Grassland	20	162	Peas
8	122	Forage Crops	21	177	Potatoes
9	131	Fallow	22	179	Other Vegetables
10	133	Barley	23	181	Berries
11	136	Oats	24	194	Nursery
12	137	Rye	25	220	Broadleaf
13	139	Triticale			

An overall map accuracy of 82.43% ($\kappa=0.78$) was achieved. Classification accuracies for individual landcover classes are as follows:

Class Name	Class Code	Users Accuracy	Producers Accuracy
Forage Crops	122	80.77	67.57
Barley	133	39.57	50.90
Oats	136	93.42	78.70
Rye	137	70.78	32.06

Wheat	146	83.81	66.36
Corn	147	90.54	94.43
Canola	153	95.40	96.02
Flaxseed	154	0.00	0.00
Sunflowers	157	82.91	94.94
Soybeans	158	91.24	83.41
Peas	162	0.00	0.00
Potatoes	177	0.00	0.00

Credits

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Use limitations

SMAPVEX12 DATA DISTRIBUTION AGREEMENT

All SMAPVEX12 data (except those already on public domain servers) will be placed on the University of Sherbrooke site. Access will be limited by password that will be provided to principle investigators and co-investigators listed below. It will be up to the principle investigators and co-investigators to ensure that staff, graduate students and post docs respect the terms of the agreement on usage and distribution. Access to the website will be restricted until July 1, 2013 for preliminary research and quality control. After July 1, 2013 all data will be transferred to a SMAP DAAC.

Principle Investigators

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Co-Investigators

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Kalifa Goïta, University of Sherbrooke

Marco Carrera, Environment Canada, Meteorological Research Division

Steven Chan, JPL

Vanessa Escobar, NASA GSFC

ArcGIS Metadata ►

Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE environment, geoscientificInformation

* CONTENT TYPE Downloadable Data

THEME KEYWORDS environment, geoscientificInformation

THESAURUS ►

TITLE ISO 19115 Topic Categories

Hide Thesaurus ▲

THEME KEYWORDS SMAPVEX12, crop map, landcover

Hide Topics and Keywords ▲

Citation ►

* TITLE SMAPVEX_2012_Crop_Map

PRESENTATION FORMATS digital map

FGDC GEOSPATIAL PRESENTATION FORMAT raster digital data

Hide Citation ▲

Resource Details ►

DATASET LANGUAGES English (CANADA)

DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

SPATIAL REPRESENTATION TYPE * grid

* PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; ESRI ArcGIS 10.0.5.4400

CREDITS

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ARCGIS ITEM PROPERTIES

* NAME SMAPVEX_2012_Crop_Map

* LOCATION

file:///\\mbwinnfs106\gis\data8\projects\land\soil\SMAPVEX12\data\Geodatabase\SMAPVEX_MASTER.gdb

* ACCESS PROTOCOL Local Area Network

[Hide Resource Details ▲](#)

Extents ►

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

WEST LONGITUDE -98.637699

EAST LONGITUDE -97.535039

SOUTH LATITUDE 49.355952

NORTH LATITUDE 50.067912

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -98.637699

* EAST LONGITUDE -97.535039

* NORTH LATITUDE 50.067912

* SOUTH LATITUDE 49.355952

* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE 526305.723891

* EAST LONGITUDE 604858.385532

* SOUTH LATITUDE 5468029.129532

* NORTH LATITUDE 5546246.169193

* EXTENT CONTAINS THE RESOURCE Yes

Hide Extents ▲

Resource Points of Contact ►

POINT OF CONTACT

INDIVIDUAL'S NAME Grant Wiseman

ORGANIZATION'S NAME Agriculture and Agri-Food Canada – Agriculture et Agroalimentaire Canada

CONTACT'S POSITION Senior Geomatics Scientist – Scientifique principal en géomatique

CONTACT'S ROLE point of contact

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TYPE both

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CITY Winnipeg

ADMINISTRATIVE AREA Manitoba

POSTAL CODE R3C 3G7

COUNTRY CA

E-MAIL ADDRESS grant.wiseman@agr.gc.ca

[Hide Contact information ▲](#)

[Hide Resource Points of Contact ▲](#)

Resource Maintenance ►

RESOURCE MAINTENANCE

UPDATE FREQUENCY as needed

[Hide Resource Maintenance ▲](#)

Resource Constraints ►

CONSTRAINTS

LIMITATIONS OF USE

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[Hide Resource Constraints ▲](#)

Spatial Reference ►

ARCGIS COORDINATE SYSTEM

- * TYPE Projected
- * GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983
- * PROJECTION NAD83_UTM_zone_14N
- * COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

X ORIGIN -5120900

Y ORIGIN -9998100

XY SCALE 450445547.3910538

Z ORIGIN -100000

Z SCALE 10000

M ORIGIN -100000

M SCALE 10000

XY TOLERANCE 0.001

Z TOLERANCE 0.001

M TOLERANCE 0.001

HIGH PRECISION true

WELL-KNOWN TEXT

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REFERENCE SYSTEM IDENTIFIER

- * VALUE 0

Hide Spatial Reference ▲

Spatial Data Properties ►

GEORECTIFIED GRID ▶

NUMBER OF DIMENSIONS 2

CELL GEOMETRY area

Hide Georectified Grid ▲

Hide Spatial Data Properties ▲

Geoprocessing history ▶

PROCESS

PROCESS NAME

DATE 2013-01-15 15:08:36

TOOL LOCATION c:\program files (x86)\arcgis\desktop10.0\ArcToolbox\Toolboxes\Data Management Tools.tbx\CopyRaster

COMMAND ISSUED

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CopyRaster
W:\data8\projects\land\soil\SMAPVEX12\data\Landcover\SMAPVEX_2012_Crop_Map.tif
W:\data8\projects\land\soil\SMAPVEX12\data\Kurt\SMAPVEX_MASTER.gdb\SMAPVEX_201
2_Crop_Map # # # NONE NONE #
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INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

Hide Geoprocessing history ▲

Distribution ▶

DISTRIBUTION FORMAT

* NAME File Geodatabase Raster Dataset

Hide Distribution ▲

Metadata Details ▶

METADATA LANGUAGE English (CANADA)

METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset

SCOPE NAME * dataset

* LAST UPDATE 2013-03-19

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

METADATA STYLE ISO 19139 Metadata Implementation Specification

STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2013-01-15 15:08:33

LAST MODIFIED IN ARCGIS FOR THE ITEM 2013-03-19 10:23:01

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2013-03-19 10:23:01