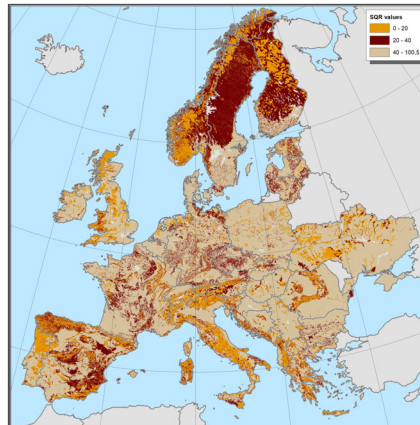


SEEMLA_SQR_cntr

Shapefile



Tags

Muenchenberg soil quality rating (SQR)

Summary

The dataset was developed for the assessment of soil quality and the identification of marginal land suitable for biomass production in Europe.

Description

Generic soil parameters are described in the SQR scheme by eight (8) basic indicators (B 1: soil substrate, B 2: A horizon depth, B 3: topsoil structure, B 4: subsoil compaction, B 5: rooting depth, B 6: profile available water, B 7: wetness and ponding, B 8: slope and relief). The weighted sum of the single scores results in the basic score, which ranges between 0 (absolutely infertile soils) and 34 (best suited croplands).

Soil conditions and ecological functions are further influenced by additional factors, expressed by 13 hazard indicators (H 1: contamination, H 2: salinization, H 3: sodification, H 4: acidification, H 5: low total nutrient status, H 6: soil depth above hard rock, H 7: drought, H 8: flooding or extreme waterlogging, H 9: steep slope, H 10: rock at the surface, H 11: high percentage of coarse soil texture fragments, H 12: unsuitable soil thermal regime, H 13: miscellaneous hazards).

Each hazard indicator is assigned a multiplier on a ratio scale between 0 and 3, according to the **SQR guidelines**. The multiplier is inversely proportional to the significance of the hazard indicator so the lowest multiplier found for the respective site is actually the most important hazard. The final SQR score is the product of the basic score by the lowest hazard indicator multiplier, ranging between 0 and 102.

Credits

The dataset was developed as part of the H2020 project "Sustainable exploitation of biomass for bioenergy from marginal lands in Europe" - SEEMLA (Project Grant Agreement no. 691874) by the Democritus University of Thrace.

Use limitations

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Extent

West -31.378559 **East** 59.462788
North 71.896640 **South** 32.942461

Scale Range

Maximum (zoomed in) 1:20,000,000
Minimum (zoomed out) 1:50,000,000

ArcGIS Metadata ►

Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE farming, economy, environment, geoscientificInformation, society

* CONTENT TYPE Downloadable Data
 EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

Hide Topics and Keywords ▲

Citation ►

* TITLE SEEMLA_SQR_cnr
 ALTERNATE TITLES SQR values per European country
 CREATION DATE 2018-12-17 00:00:00
 PUBLICATION DATE 2018-12-21 00:00:00

EDITION December 2018
 EDITION DATE 2018-12-31

PRESENTATION FORMATS * digital map
 FGDC GEOSPATIAL PRESENTATION FORMAT vector digital data

RESOURCE IDENTIFIER
 VALUE D6.6 SEEMLA

OTHER CITATION DETAILS

Dimitriadis, E., Gounaris, N., Vlachaki, D. & Galatsidas, S. (2018). GIS application – Final version (D6.6). In: SEEMLA project reports, supported by the EU's Horizon 2020 programme under GA No. 691874, Democritus University of Thrace, Orestiada, Greece.

Hide Citation ▲

Citation Contacts ►

RESPONSIBLE PARTY
 INDIVIDUAL'S NAME Spyridon Galatsidas
 ORGANIZATION'S NAME Democritus University of Thrace
 CONTACT'S POSITION Assistant Professor

CONTACT'S ROLE point of contact

[Hide Citation Contacts ▲](#)

Resource Details ►

DATASET LANGUAGES * Greek, Modern (1453-) (GREECE)

SPATIAL REPRESENTATION TYPE * vector

* PROCESSING ENVIRONMENT Version 6.2 (Build 9200) ; Esri ArcGIS 10.2.2.3552

CREDITS

The dataset was developed as part of the H2020 project "Sustainable exploitation of biomass for bioenergy from marginal lands in Europe" - SEEMLA (Project Grant Agreement no. 691874) by the Democritus University of Thrace.

ARCGIS ITEM PROPERTIES

* NAME SEEMLA_SQR_cntr

* SIZE 720.807

* LOCATION file:///server-1\A P X E I

Ο\ΠΡΟΓΡΑΜΜΑΤΑ\ΕΓΚΕΚΡΙΜΕΝΑ\ΠΡΓ_32_SEEMLA\32_ΠΡΓ_Deliverables\WP6
 \GIS\ForUpload_SEEMLA_website\SEEMLA_SQR_cntr.shp

* ACCESS PROTOCOL Local Area Network

[Hide Resource Details ▲](#)

Extents ►

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching

* WEST LONGITUDE -31.378559

* EAST LONGITUDE 59.462788

* NORTH LATITUDE 71.896640

* SOUTH LATITUDE 32.942461

* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE 2636200.000000

* EAST LONGITUDE 6476840.380900

* SOUTH LATITUDE 1426051.318400

* NORTH LATITUDE 5415697.074100

* EXTENT CONTAINS THE RESOURCE Yes

[Hide Extents ▲](#)

Resource Constraints ►

CONSTRAINTS

LIMITATIONS OF USE

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LEGAL CONSTRAINTS

ACCESS CONSTRAINTS copyright
 USE CONSTRAINTS intellectual property rights

[Hide Resource Constraints ▲](#)

Spatial Reference ►

ARCGIS COORDINATE SYSTEM

- * TYPE Projected
- * GEOGRAPHIC COORDINATE REFERENCE GCS_ETRS_1989
- * PROJECTION ETRS_1989_LAEA
- * COORDINATE REFERENCE DETAILS
 - PROJECTED COORDINATE SYSTEM
 - WELL-KNOWN IDENTIFIER 3035
 - X ORIGIN -8426600
 - Y ORIGIN -9526700
 - XY SCALE 353290001.83332509
 - 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
 - LATEST WELL-KNOWN IDENTIFIER 3035
 - WELL-KNOWN TEXT PROJCS["ETRS_1989_LAEA",GEOGCS["GCS_ETRS_1989",DATUM["D_ETRS_1989",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Lambert_Azimuthal_Equal_Area"],PARAMETER["false_easting",4321000.0],PARAMETER["false_northing",3210000.0],PARAMETER["central_meridian",10.0],PARAMETER["latitude_of_origin",52.0],UNIT["Meter",1.0],AUTHORITY["EPSG",3035]]

REFERENCE SYSTEM IDENTIFIER

- * VALUE 3035
- * CODESPACE EPSG
- * VERSION 8.2.6

[Hide Spatial Reference ▲](#)

Spatial Data Properties ►

VECTOR ►

- * LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS

- FEATURE CLASS NAME SEEMLA_SQR_cntr
- * OBJECT TYPE composite
- * OBJECT COUNT 3262

[Hide Vector ▲](#)

ARCGIS FEATURE CLASS PROPERTIES ►

- FEATURE CLASS NAME SEEMLA_SQR_cntr

- * FEATURE TYPE Simple
- * GEOMETRY TYPE Polygon
- * HAS TOPOLOGY FALSE
- * FEATURE COUNT 3262
- * SPATIAL INDEX TRUE
- * LINEAR REFERENCING FALSE

[Hide ArcGIS Feature Class Properties ▲](#)

[Hide Spatial Data Properties ▲](#)

Data Quality ►

SCOPE OF QUALITY INFORMATION ►

RESOURCE LEVEL dataset

SCOPE DESCRIPTION

DATASET

soil properties, elevation

[Hide Scope of quality information ▲](#)

DATA QUALITY REPORT - QUANTITATIVE ATTRIBUTE ACCURACY ►

DIMENSION horizontal

MEASURE NAME SQR values

QUANTITATIVE TEST RESULTS

VALUE SQR

UNITS

SYMBOL [arb'U]

[Hide Data quality report - Quantitative attribute accuracy ▲](#)

[Hide Data Quality ▲](#)

Lineage ►

LINEAGE STATEMENT

The lineage of the dataset is described in Dimitriadis, E., Gounaris, N., Vlachaki, D. & Galatsidas, S. (2018). GIS application – Final version (D6.6). In: SEEMLA project reports, supported by the EU's Horizon 2020 programme under GA No. 691874, Democritus University of Thrace, Orestiada, Greece.

PROCESS STEP ►

DESCRIPTION

All input datasets were converted into raster format with the following characteristics:

Cell size: 500 m x 500 m

The coordinate reference system is ETRS89-LAEA Europe, EPSG:3035.

Latitude of Origin: 52 N Longitude of origin (Central Meridian): 10 E

The resolution was selected following the resolution of the geospatial data available for soil texture classes from ESDAC. The selection was based on the fact that soil texture is itself one of the basic indicators for the calculation of SQR (BI1) and also a parameter for the calculation of two additional basic indicators (BI5 & BI6). Thus, the application of its resolution was selected to reflect substrate variations across Europe. Resampling for discrete data (e.g. land use) was performed using the nearest resampling algorithm

whereas bilinear interpolation was applied for continuous data.

Snap raster: USDA texture classes

Transformations required:

- Vector to raster
- Project in the same coordinate system
- Resample to determine common cell size
- Snap raster to avoid minor shifts

RATIONALE

Each raster value was reclassified based on the SQR field manual, the SQR assessment scheme according to the Federal Institute for Geosciences and Natural Resources - BGR (2014) and adaptations made by BTU CS within the SEEMLA project.

PROCESS CONTACT

INDIVIDUAL'S NAME Elias Dimitriadis
CONTACT'S ROLE processor

PROCESS CONTACT

INDIVIDUAL'S NAME Despoina Vlachaki
CONTACT'S ROLE user

Hide Process step ▲

SOURCE DATA ►

DESCRIPTION

The entire list of geospatial datasets reviewed within the SEEMLA project either as indicators for the calculation of the SQR index, or as elimination criteria for MagL availability, are included in Annex I and their coverage of European countries is included in Annex II of D6.6.

SOURCE MEDIUM NAME online link

SOURCE CITATION ►

TITLE Dimitriadis, E., Gounaris, N., Vlachaki, D. & Galatsidas, S. (2018a). GIS application – Final version (D6.6). In: SEEMLA project reports, supported by the EU's Horizon 2020 programme under GA No. 691874, Democritus University of Thrace, Orestiada, Greece.

CREATION DATE 2018-12-19 00:00:00

EDITION DATE 2018-12-19

RESOURCE IDENTIFIER

VALUE SQR

REFERENCE THAT DEFINES THE VALUE ►

TITLE Dimitriadis, E., Gounaris, N., Vlachaki, D. & Galatsidas, S. (2018a). GIS application – Final version (D6.6). In: SEEMLA project reports, supported by the EU's Horizon 2020 programme under GA No. 691874, Democritus University of Thrace, Orestiada, Greece.

CREATION DATE 2018-12-17 00:00:00

Hide Reference that defines the value ▲

Hide Source citation ▲

[Hide Source data ▲](#)[Hide Lineage ▲](#)

Geoprocessing history ►

PROCESS

PROCESS NAME Raster to Polygon (2)
DATE 2018-11-22 11:33:22
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.2\ArcToolbox\Toolboxes\Conversion Tools.tbx\RasterToPolygon
COMMAND ISSUED
 RasterToPolygon H:\SEEMLAfin\SEEMLA_outputs_V11.gdb\Int_sqrb
 H:\SEEMLAfin\SEEMLA_outputs_V11.gdb\shp\SQRb SIMPLIFY Value
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-11-22 11:53:54
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.2\ArcToolbox\Toolboxes\Data Management Tools.tbx\Dissolve
COMMAND ISSUED
 Dissolve SQRb H:\SEEMLAfin\SEEMLA_outputs_V11.gdb\analysis\SQRb_dis gridcode #
 MULTI_PART DISSOLVE_LINES
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-11-22 16:52:49
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.2\ArcToolbox\Toolboxes\Data Management Tools.tbx\CopyFeatures
COMMAND ISSUED
 CopyFeatures H:\SEEMLAfin\SEEMLA_outputs_V11.gdb\analysis\SQRb_dis
 H:\SEEMLAfin\Final_shp\SQRb_dis.shp # 0 0 0
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME
DATE 2018-12-13 10:31:39
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.2\ArcToolbox\Toolboxes\Data Management Tools.tbx\MultipartToSinglepart
COMMAND ISSUED
 MultipartToSinglepart SEEMLA_SQR_scores C:\Users\user1
 \Documents\ArcGIS\Default.gdb\SEEMLA_SQR_scores_sp
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME Repair Geometry
DATE 2018-12-13 11:17:46
TOOL LOCATION c:\program files (x86)\arcgis\desktop10.2\ArcToolbox\Toolboxes\Data Management Tools.tbx\RepairGeometry
COMMAND ISSUED
 RepairGeometry SEEMLA_SQR_scores_sp DELETE_NULL
INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME

DATE 2018-12-14 16:23:27

TOOL LOCATION c:\program files (x86)\arcgis\desktop10.2\ArcToolbox\Toolboxes\Analysis Tools.tbx\Identity

COMMAND ISSUED

Identity SEEMLA_SQR_scores_sp SEEMLA_countries C:\Users\user1
 \Documents\ArcGIS\Default.gdb\SEEMLA_SQR_scores_sp_Identit ALL #
 NO_RELATIONSHIPS

INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

PROCESS

PROCESS NAME

DATE 2018-12-14 17:03:30

TOOL LOCATION c:\program files (x86)\arcgis\desktop10.2\ArcToolbox\Toolboxes\Data Management Tools.tbx\Dissolve

COMMAND ISSUED

Dissolve SEEMLA_SQR_scores_sp_Identit C:\Users\user1
 \Documents\ArcGIS\Default.gdb\SEEMLA_SQR_scores_sp_Id_dis gridcode;Country #
 MULTI_PART DISSOLVE_LINES

INCLUDE IN LINEAGE WHEN EXPORTING METADATA No

Hide Geoprocessing history ▲

Distribution ►

DISTRIBUTION FORMAT

* NAME Shapefile

VERSION ArcGIS 10.2.2

TRANSFER OPTIONS

* TRANSFER SIZE 720.807

ONLINE SOURCE

LOCATION <http://seemla.eu/en/project-deliverables/>

FUNCTION PERFORMED download

Hide Distribution ▲

Fields ►

DETAILS FOR OBJECT SEEMLA_SQR_cntr ►

* TYPE Feature Class

* ROW COUNT 3262

DEFINITION

SQR polygons

DEFINITION SOURCE

Soil Quality Rating (Mueller et al., 2007)

FIELD FID ►

* ALIAS FID

* DATA TYPE OID

* WIDTH 4

* PRECISION 0

* SCALE 0

* FIELD DESCRIPTION

Internal feature number.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES
Sequential unique whole numbers that are automatically generated.

Hide Field FID ▲

FIELD OBJECTID ►

* ALIAS OBJECTID
* DATA TYPE Integer
* WIDTH 9
* PRECISION 9
* SCALE 0
* FIELD DESCRIPTION
Internal feature number.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES
Sequential unique whole numbers that are automatically generated.

Hide Field OBJECTID ▲

FIELD Shape ►

* ALIAS Shape
* DATA TYPE Geometry
* WIDTH 0
* PRECISION 0
* SCALE 0
* FIELD DESCRIPTION
Feature geometry.

* DESCRIPTION SOURCE
Esri

* DESCRIPTION OF VALUES
Coordinates defining the features.

Hide Field Shape ▲

FIELD gridcode ►

* ALIAS gridcode
* DATA TYPE Integer
* WIDTH 9
* PRECISION 9
* SCALE 0
FIELD DESCRIPTION

Soil Quality Rating values

DESCRIPTION SOURCE

Soil Quality Rating (Mueller et al., 2007)

RANGE OF VALUES

MINIMUM VALUE 0

MAXIMUM VALUE 102

MEASUREMENT RESOLUTION 500

ACCURACY INFORMATION

ACCURACY 0 - very poor soil quality, 102 excellent soil quality for cropping
[Hide Field gridcode ▲](#)

FIELD Country ►

* ALIAS Country

* DATA TYPE String

* WIDTH 40

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Country boundaries

DESCRIPTION SOURCE

TM_WORLD_BORDERS-0.3

CODED VALUES

NAME OF CODELIST World countries

SOURCE TM_WORLD_BORDERS-0.3

[Hide Field Country ▲](#)

FIELD Shape_Leng ►

* ALIAS Shape_Leng

* DATA TYPE Double

* WIDTH 19

* PRECISION 0

* SCALE 0

FIELD DESCRIPTION

Shape length

DESCRIPTION SOURCE

Esri

DESCRIPTION OF VALUES

Positive real numbers.

[Hide Field Shape_Leng ▲](#)

FIELD Shape_Area ►

* ALIAS Shape_Area

* DATA TYPE Double

* WIDTH 19

* PRECISION 0

- * SCALE 0
- * FIELD DESCRIPTION
Area of feature in internal units squared.
- * DESCRIPTION SOURCE
Esri
- * DESCRIPTION OF VALUES
Positive real numbers that are automatically generated.

[Hide Field Shape_Area ▲](#)

[Hide Details for object SEEMLA_SQR_cntr ▲](#)

[Hide Fields ▲](#)

Metadata Details ►

METADATA LANGUAGE English (GREECE)
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

METADATA IDENTIFIER SQR_17122018

SCOPE OF THE DATA DESCRIBED BY THE METADATA * dataset
SCOPE NAME * dataset

* LAST UPDATE 2018-12-27

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0
STANDARD OR PROFILE USED TO EDIT METADATA ISO19139
METADATA STYLE ISO 19139 Metadata Implementation Specification

CREATED IN ARCGIS FOR THE ITEM 2018-12-27 12:45:36
LAST MODIFIED IN ARCGIS FOR THE ITEM 2018-12-27 13:30:59

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes
LAST UPDATE 2018-12-27 13:30:59

ITEM LOCATION HISTORY

ITEM COPIED OR MOVED 2018-12-12 10:54:10
FROM W:\ΠΡΟΓΡΑΜΜΑΤΑ\ΕΓΚΕΚΡΙΜΕΝΑ\ΠΡΓ_32_SEEMLA\32_ΠΡΓ_Deliverables\WP6\D6.6
\GIS_outputs\shp\SQRb_dis
TO \\server-1\A P X E I
O\ΠΡΟΓΡΑΜΜΑΤΑ\ΕΓΚΕΚΡΙΜΕΝΑ\ΠΡΓ_32_SEEMLA\32_ΠΡΓ_Deliverables\WP6\D6.6
\Final_shp\SQRb_dis

[Hide Metadata Details ▲](#)

Metadata Contacts ►

METADATA CONTACT

INDIVIDUAL'S NAME Spyridon Galatsidas
ORGANIZATION'S NAME Democritus University of Thrace
CONTACT'S POSITION Assistant Professor
CONTACT'S ROLE point of contact

CONTACT INFORMATION ▶

ADDRESS

TYPE

E-MAIL ADDRESS sgalatsi@fmenr.duth.gr

Hide Contact information ▲

Hide Metadata Contacts ▲

Thumbnail and Enclosures ▶

THUMBNAIL

THUMBNAIL TYPE JPG

Hide Thumbnail and Enclosures ▲

FGDC Metadata (read-only) ▼