A discussion document for achieving alignment between *e-SOTER* and *GlobalSoilMap.net*

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Background

At the present time, there are at least two separate and parallel projects underway that share a vision to produce new soil information on a global basis. The *GlobalSoilMap.net* project has a commitment to produce maps of continuous variation both vertically (with depth) and laterally (at 90 m grid resolution) for a selected number of soil properties. The *e-SOTER* project has an ambition to apply newly demonstrated methods to produce more conventional area-class soil maps, in polygon format, for entire continents and, eventually, the entire world at a nominal scale of 1:1 million.

Both of these projects are being coordinated by the same institute (ISRIC) and both involve participation or funding from overlapping groups of co-operators (e.g. JRC, ISS-CAS). Both can be seen as competing with each other for attention, funding and technical resources. At present, both are entirely separate endeavours with no effective coordination or cooperation. This lack of alignment and integration has the potential to create confusion in the minds of potential supporters or co-operators. Questions have arisen, and will continue to arise, about the degree of alignment of these separate projects including whether, or to what degree, there has been an effort to achieve a degree of coordination and cooperation between them, both technically and institutionally. It is in the interests of both projects that these issues and concerns be identified and addressed in a constructive and effective manner.

A proposal for alignment and harmonization of the *GlobalSoilMap* and *e-SOTER* projects

It is proposed that a dialogue be initiated between representatives of the *GlobalSoilMap.net* and *e-SOTER* projects to identify ways in which the two projects can improve their alignment in terms of both institutional/financial issues and technical issues.

If we begin by consideration of alignment on technical issues, this may lead logically to identification of ways in which the two projects can achieve alignment on institutional and financial issues.

From the point of view of the *GlobalSoilMap.net* project, the main technical issues of concern are:

1. To what degree will the procedures eventually adopted to predict continuous soil property values make use of *e-SOTER* type conventional area-class maps as a key covariate for predicting soil properties?
2. If such polygonal area-class maps are determined to be a necessary input for soil property predictions, to what extent will area-class maps produced using an *e-SOTER* approach fulfil the needs of *GlobalSoilMap.net* node participants for area-class maps?
3. Would it be possible and desirable for the *GlobalSoilMap.net* project to adopt an *e-SOTER* type approach for producing new area-class maps (where needed) for use in predicting soil properties?
4. If the *GlobalSoilMap.net* project were to adopt an *e-SOTER* type approach to produce area-class maps for use as covariates, would it be logical and desirable to apply this approach internally using *GlobalSoilMap.net* personnel or would it be preferable to outsource this activity to a separate and independent *e-SOTER* production group?
5. Even if the *GlobalSoilMap.net* and *e-SOTER* projects remained entirely separate, to what extent might they be able to both benefit from sharing of input data sets (covariates), output products (area-class maps and soil property maps) and methods?

From the point of view of the *e-SOTER* project, the main technical issues of concern are:

1. Can *e-SOTER* align itself with the *GlobalSoilMap.net* project to the extent that outputs of area-class maps from *e-SOTER* become inputs for the *GlobalSoilMap.net* project?
2. Can production of *e-SOTER* type maps be assisted by making use of digital data sets assembled for use in the *GlobalSoilMap.net* project and is it then legitimate to turn around and use the resulting *e-SOTER* maps as input for *GlobalSoilMap.net*?
3. Can the *e-SOTER* project make use of prediction methods developed for the *GlobalSoilMap.net* project in the production of its area-class polygonal maps?

Should alignment on technical issues prove feasible and desirable, then consideration will need to be given to how to achieve improved alignment on institutional and funding issues. The key questions here are:

1. Should the two projects be tightly integrated or should they remain clearly separate projects with just an improved level of coordination and communication?
2. Can the projects develop marketing plans that are supportive and complementary?
3. Can we present a coordinated and integrated message that will convince supporters that the two projects are mutually complementary and well integrated?
4. Can each project continue to progress if the other slows or stops for some reason?

Coordination of output products for inclusion in GEOSS

A second area where the two projects need to have a dialogue has to do with preparation and presentation of a unified proposal for inclusion of soils information in the GEOSS framework.

A proposal to include global soils information within the GEOSS framework has already been initiated. This proposal envisages defining a capability to produce and deliver global soils information as both continuous soil property maps in raster format (at 90 m) and discrete area-class maps in vector format, at a scale of 1:1 million. The *GlobalSoilMap.net* project has, as yet, only been minimally involved in the preparation of this proposal but will be a key player in the production of any global soils data that are likely to be delivered to GEOSS. It is important that any proposal to include soils information in GEOSS be supported by, and be supportive of, both the *GlobalSoilMap.net* and *e-SOTER* initiatives.

We need to have a dialogue to coordinate efforts to define the structure and content of soils information for the GEOSS platform. We need to consider how delivery of global soils data to GEOSS can be rationalised with respect to other platforms from which global soils data are likely to be served (ISRIC, Google Earth, INSPIRE, National Soil Information Systems).

What to do next?

It is proposed that representatives of the *GlobalSoilMap.net* and *e-SOTER* projects meet to discuss establishment of mechanisms and structures by which the alignment and coordination of the two projects can be improved.

An initial meeting is proposed for Friday, May 21, 2010 in Rome, Italy. This meeting will take advantage of the fact that many of the potential contributors to this discussion will already be coming to Rome to participate in the Digital Soil Mapping 2010 workshop that begins on Monday, May 24, 2010.

The objectives of this discussion will be:

1. To achieve agreement in principal on technical mechanisms and procedures that could be of mutual benefit to both projects.
2. To achieve agreement in principal on mechanisms and procedures for institutional and organizational cooperation that will lead to improved alignment of the two projects and an improved ability to convince potential supporters and participants that they two projects are complementary and coordinated.
3. To discuss and agree upon a coordinated strategy for moving forward with a plan for defining the content and structure of global soil information for inclusion in GEOSS.