

MINUTES OF THE ESNB PLENARY MEETING (2009)

Date: 14-16 September; 2009

Place: Gödöllő - Budapest

Participants: see annexed list.



The plenary meeting of 2009 consisted of two consecutive events:

- A) The first two days of the meeting dealt with issues directly linked to the activities of the ESNB.
- B) The third day of the meeting was dedicated to the conference “Bridging the centuries 1909-2009”.

A) ANNUAL PLENARY MEETING

Based on the program agreed among the members, the plenary meeting started with a welcome messages and tour de table. The report of the ESNB Steering Committee was presented by Arnold Arnoldussen (chairman of the SC). A new member to the Steering Committee has been elected next. The agenda continued with the introduction of soil related activities in the JRC in 2009-2010 (by Luca Montanarella). The bulk of the program has been dedicated to the overview of activities of the ESNB working groups and three specific topics of discussion. Further to ESNB topics, presentations on national soil protection legislation (Hungary) and soil survey (USA) have been delivered to the plenary. Other businesses were discussed to conclude the session.

1. Report of the Steering Committee and discussion

An introduction about the contacts with the EIONET were given as well as about the setting up of an editorial board for ESNB publications.

During the discussion of the report several questions and comments have been raised and general consensus was formed on the need:

- for proactively drive soil related international research and policy agenda (WE, AA, HM, WB) including forecasting future problems and providing elimination plan (HM);
- to highlight linkages between soil and water quality (GyV);
- defining activities on different time-scales, e.g. renewable energy directive: short; education: mid-term (WB);
- to follow the mission of the ESNB to advice the JRC (AA);
- on the need to promote soil science in interdisciplinary issues (JR, FL);
- to think about food security, population growth and climate change (MK);
- for a declaration on soil for the Copenhagen conference on climate change (FL, AJ);
- continue the effort towards an international panel on land and soil (WB);
- increase the activities related to public awareness, including the presentation of positive projects with soil component in them (NF, RC, AA).

Luca Montanarella proposed to the ESNB to compile a report on current and potential issues of interest related to soil resources.

2. Election of a new Steering Committee member

The mandate of Christine Le Bas as a Steering Committee member is expired and Ferdo Basic was elected as new member.

3. Soil Activities in te JRC during 2009 and outlook for 2010 and discussion (Luca Montanarella)

LM explained the different pillars of the Thematic Strategy for Soil Protection and the current status of the implementation phase. He also introduced the status of the ESDAC as well as different projects currently carried out (BIOSOL, LUCAS, etc.) and planned in the JRC. (For further details, please consult <http://eusoils.jrc.ec.europa.eu>.)

For questions and comments LM explained that

- a growing gap can be sensed between European and state level policy activities requesting soil information
- exploratory projects are on the way which might require to establish new structures (eg. soil monitoring / soil conservation service)
- *LUCAS is a repetitive and very well documented exercise which has been focusing mainly on land use survey. There is a good chance to continue soil sampling with the regular LUCAS survey.*

4.) Progress of the ESNB Working Groups

The ESNB currently has four active working groups (JRC staff members are participating in the work of each WG):

- WG1: on Inspire and ESDAC
- WG2: on Soil Database Scale 1:250.000
- WG 3: on Delineation Priority Area at Risk.
- WG 4: on Soil Awareness and Education.

Further to the above four ESNB WGs, the JRC has created in 2008 a WG on soil biodiversity. The report of the activities within this WG has been put also on the agenda of the ESNB plenary meeting.

Summary of the reports of the Working Groups:

WG1 (report presented by Endre Dobos)

The mandate of the WG includes data specification for ESDAC, in the frame of INSPIRE, taking consideration of existing datasets (European and national).

In the progress report INSPIRE components of the activities have been introduced. The focus of the WG is now turning towards metadata and interoperability issues. A roadmap of data specification development has been introduced. Elements of the „INSPIRE tender” - being under negotiation with the Consortium holding a framework contract on service supply to the JRC - has been explained, including the draft task specification. The immediate next step of the WG is to prepare an inventory of soil data availability in Europe (international and national data sources) that could be of interest to the ESDAC.

Discussion on the topic included:

- *the linkages between WG and consortium: WG is the supervisory body of the work carried out within the consortium (ED).*

WG2 (report presented by Wolf Eckelmann)

The mandate of the Working group is to review the current manual of procedures to make a 1:250.000 soil data base over Europe with inclusion of Digital Soil Mapping Technologies to increase the quality of the maps and to outline structure and process for the development of a full European coverage of 1:250.000 soil data bases.

The WG has reviewed some national approaches, data availability and data quality that might provide an example for procedure development.

As a main activity of the WG, drafting of a terms of reference for the Consortium (holding the framework contract on service supply to the JRC) has been carried out. Elements of the terms of reference include:

- gathering of available soil map information (European, national sources)
- definition of the 1:250.000 product (a single conceptual model)
- decision on regional stratification of maps, „soil scapes”, soil regions
- target geometrics
- database structure

Deliverable of the consortium is defined as: text and tables of manual of procedure and case studies.

WG3 (report presented by Mark Kibblewhite)

The mandate of the WG3 is to evaluate the criteria proposed for delineation of risk areas during the discussions on the annex of the Soil Directive, and propose to the JRC further studies and projects to test the result of this evaluation. A concept of risk assessment has been explained in the presentation (standard risk assessment methodology - that is applied in other environmental fields – need to be adopted for soils). A tiered approach (the right approach from scientific point of view) of risk assessment has been introduced. It was underlined that a comprehensive definition of acceptable harm is needed. A schedule of activities for the next period and a plan for the first Report has been explained.

Discussion on the topic included:

- *explanation of the usefulness of DPSIR approach in understanding processes (WB, CIB);*

- a comment on the differences in (operational) standard risk assessment methodology and the DPSIR model (MK);
- information about the emergence of determine dynamic soil properties and state-transition models for ecological characterization and efforts to link these to land management programs in the US (MG);
- models on changing soil functions are missing (RB);
- Differences in data bases and methodologies applied in regions and countries in Europe (RB)
- The need for the harmonization among the activities (SB).

WG 4 (report presented by Willie Towers)

Mandate of this WG is to establish an action plan for the development of measures/programmes/initiatives to raise awareness of the importance of soil across European society (i.e. policy makers, general public, universities, schools, industry, etc.). In the presentation of the activities an overview of the possibilities on educational activities, connection to policy and politicians, using the media, organizing events was given. Three key groups have been identified: i) education, ii) policy awareness and iii) public stakeholder groups. Existing networks (professional and civil) should be utilized to reach these groups. For efficient communication, some hot issues should be put into the core (loss of habitat, food security, climate change etc.).

Future plans of the WG include:

- to establish web portal
- share knowledge and experience of different mechanism of awareness rising
- identify case studies across policy areas
- comply a strategy document

Discussion on the topic included the need:

- to introduce soil security as a core topic of the WG (JR);
- to prepare a directory of organizations dealing with soil in Europe (JR);
- to include planners, civil engineers and architects to the list of interest groups (BV, JR).

WG on Soil Biodiversity (report presented by Rachel Creamer)

The mandate of this WG is to provide advice and assistance regarding the JRC's scientific and technical activities in support to EU soil policy making and research on the field of soil biodiversity. Current and future activities of the WG has been presented. Main focus of the current activities is to define priority fields of research and to describe the potential threats to soil biodiversity. The „Atlas of Soil Biodiversity in Europe” is being compiled and should be ready for publishing in 2010. The most important activities for the future are to develop a database on the status of soil biodiversity in Europe and develop action plan for awareness rising.

Discussion on the topic included:

- need to prepare a redlist of soils to identify endangered soils, including from the soil biota point of view (WB);
- need for a WG on soil biodiversity and soil diversity (there is a strong connection between the two) (NK).

5. Discussion Forums

Discussion forums were held during the meeting on: a) soil data hierarchy and ESDAC; b) on benchmark soils; and c) on the soil's role in the "Biofuel directive" of the EU.

a) DF on soil data hierarchy and ESDAC

Soil data hierarchy is currently being developed. Lively discussion formed on the necessity of soil classification information, conversion of legacy data and on the structure of data used for different scales.

Comments and questions included:

- *the preparation of a discussion document which provides guidelines for the application of WRB in creating legends for small scale maps (OS);*
- *the impossibility of translation between national soil classification units and WRB, and the need to hold original soil information (PS);*
- *on the need to include other continents to the debate on WRB (LM);*
- *the lack of data and resources to implement the introduced soil data hierarchy, while stakeholders already expect answers (FL);*
- *the need for applying rapidly developing new technologies (AA);*
- *on the inadequacy of WRB to be used for soil mapping (JB).*

b) DF on benchmark soils

Benchmark soils is a concept applied in the USA, found to be helpful for a number of purposes (e.g. education, site characterization, soil correlation) and its use in Europe shall be investigated.

Comments and questions included:

- *the system of benchmark soils in the USA is well established and used in the USA, for example for update of the soil survey (MG)*
- *Proposal was made MS should provide a list of benchmark sites which will be discussed at next SC meeting (LM)*
- *Common criteria for benchmark sites should be defined first (SH).*

c) DF on the soil's role in the "Biofuel directive"

An important aspect of the "Biofuel Directive" deals with degraded lands. In this context a definition and thresholds are needed for a) eroded soil; b) saline soil; and c) soil with low organic matter. Members of the ESNB have been asked to provide their written suggestions for definition and thresholds.

Comments and questions included:

- *Steady-state might be disturbed if degraded land is cultivated for forest etc. plantation (WB);*
- *For contamination it can be subscribed that the product material can not have a residue containing a certain level of harmful materials (MK).*

6. Other businesses

1. Introduction of soil related activities in the USA, Hungary and at the JRC

Further to the above topics, presentations on national soil protection legislation (Hungary) and soil survey (USA) have been delivered by leading experts of these fields.

- a) Béla Pirkó, a leading expert from the Hungarian Soil Conservation Service gave a talk on the Act on the Protection of Agricultural Land - the basic law of soil conservation in Hungary. This law sets the basic principals of soil conservation, including the fight against main soil threats and related environmental problems

(e.g. nitrate leaching). That act lead to setting up the soil monitoring network in the country.

- b) Michael Golden, director of the Soil Survey Division, US Department of Agriculture - Natural Resources Conservation Service (NRCS) introduced the situation of soil survey in the USA. He pointed out that in the USA by now there is a responsible person (and local office) for the soil mapping and conservation of each hectare of land. 900 soil scientist are employed in relation to soil survey, of which about half is a field soil scientist and the other half performing interpretations etc. Soil data handling and conservation programs - thus work responsibility - of the Soil Survey Service personnel is shifting from political units to geographical areas. The figure of the yearly 1,5 million users of the results of soil surveys indicate the importance of this service.

2. Proposal for a Declaration (for the conference of COP of UNCCD, Buenos Aires.

The ESNB plenary session decided to come up with a declaration which calls for the establishment of an International Panel for Soil and Land within the frame of the IPCC. This declaration is to be presented on the next COP conference in Buenos Aires.

B) “BRIDGING THE CENTURIES 1909-2009” CONFERENCE

The conference was dedicated to the historical overview of 100 years of achievements in soil science and soil policy and the definition of goals for the next century. (The first International Conference in Agrogeology – the early name for soil science – was held in Budapest in 1909.) On the first day of the conference plenary presentations were given from a wide range of soil science topics (development of soil science in the last 100 years; current research trends in soil science; status of soil information in different regions of the world etc). Further information can be found at:

http://www.mta.hu/fileadmin/2009/09/PROGRAM_Bridging_the_Centuries.pdf

On the second day of the conference was dedicated to a field trip, to re-visit some of the locations of the 1909 field excursions. Historical discussions were quoted and modern soil observations demonstrated.

On the third day, a conference on soil classification was held. The main output of the discussions was an agreement on the need to investigate the necessity and possible structure of a Universal Soil Classification (Universal Soil taxonomy) that could replace the World Reference Base for Soil Resources. Apart from presentations on taxonomic issues, aspects of practical soil classification were also introduced and discussed.

Further information on the conference can be found at:

http://www.mta.hu/fileadmin/2009/09/PROGRAM_From_Dokuchaev.pdf

Minutes compiled by Gergely Tóth
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Annex 1.

List of participants

O. Arnalds
Agricultural Research Inst. RALA
Keldnaholti
IS-112 Reykjavik
ICELAND
oa@lbhi.is

Arnold Arnoldussen (SC)
Norwegian Institute of land Inventory
PB 115, Raveien 9
N-1431 Ås
NORWAY
Arnold.Arnoldussen@skogoglandskap.no

Dominique Arrouays (WG2)
Institut National de la Recherche Agronomique,
Unite de Science du Sol
Av. Pomme de Pin BP 20619, Ardon
F-45166 CEDEX
FRANCE
arrouays@orleans.inra.fr

Ferdo Basic
Faculty of Agriculture
Dept. of General Agronomy
Svetosimunska c. 25
HR-10 000 Zagreb
CROATIA
basic@agr.hr

Stanislaw Bialousz (WG3)
Warsaw University of Technology, Laboratory of Remote Sensing and GIS
Plac Politechniki 1
PL - 00-661 Warsaw
POLAND
s.bialousz@gik.pw.edu.pl

Pavol Bielek (SC)
Soil Science and Conservation Research Inst.
Gagarinova 10
SK-82713 Bratislava
SLOVAKIA
bielek@vupu.sk

Winfried Blum (Vol)
Univ. of Natural Resources and Applied Life Sciences (BOKU)
Gregor Mendel-Str. 33
AT-1180 Vienna
AUSTRIA
herma.exner@boku.ac.at

Jaume Boixadera (WG2)
Generalitat Servei d'Agricultura DARP
Seccio d'Avaluacio de Recursos i Noves Tecnologies
Alcade Rovira Roure 177
E-25006 Lleida

SPAIN
jaume.boixadera@gencat.net

Henrik Breuning-Madsen (WG2)
Kobenhavns Universitet
Geografisk Institut,
Oster Volgade 10
DK-1350 Kobenhavn
DENMARK
breuningmadsen@yahoo.dk

Vanda Valerija Buivydaite
Soil Science and Agrochemistry Department Lithuanian Univ. of Agriculture
Studentu St 11-22,
LT-53361 Akademija,
LITHUANIA
Vanda.Buivydaite@lzuu.lt

Rachel Creamer (WG4)
Teagasc, Soils and Environment Centre
Johnstown Castle
Wexford
Ireland
Rachel.Creamer@teagasc.ie

Hamid Custovic
Institute for Pedology, Agrochemistry and Melioration
Faculty of Agriculture and Food Science
Zmaja od Bosne 8, 71000 Sarajevo
Bosnia and Herzegovina
custovic.hamid@gmail.com

Endre Dobos (WG1)
University of Miskolc
Institute of Geography, Dept. of Physical Geography and Environmental Sciences
3515 Miskolc-Egyetemváros,
Hungary
ecodobos@uni-miskolc.hu

Wolf Eckelmann (SC)
Bundesanstalt für Geowissenschaften und Rohstoffe
Stilleweg 2
D-30655 Hannover
GERMANY
w.eckelmann@bgr.de

Nicola.Filippi
Geological, Seismic and Soil Survey
Emilia-Romagna Region
Viale Silvani, 4/3,
40122 Bologna
Italy
nfilippi@regione.emilia-romagna.it

Maria da Conceição Gonçalves
Estação Agronómica Nacional
Departamento de Ciência do Solo
Av. República 2784-505 Oeiras
PORTUGAL
mc.goncalves@netc.pt

Costas Hadjiparaskevas
Ministry of Agriculture, Natural Resources & Environment
Dept. of Agriculture
3 Rafina
Cy-2039 Strovolos
CYPRUS
chadjiparaskevas@da.moa.gov.cy

Sigbert Huber (WG3)
Umweltbundesamt GmbH
Spittelauer Lände 5
A - 1090 Vienna
AUSTRIA
sigbert.huber@umweltbundesamt.at

Aldis Karklins
Institute of Soil and Plant Sciences
2 Liela Street
LV - LV-3001 Jelgava
LATVIA
aldis.karklins@llu.lv

Mark Kibblewhite (WG3)
National Soil Resources Institute (NSRI)
Cranfield University
Cranfield, Bedfordshire MK43 0AL.
UNITED KINGDOM
m.kibblewhite@cranfield.ac.uk

Mirko Knezevic
Biotechnical Institute
Kralja Nikole BB
81000 Podgorica
MONTENEGRO
knez@cg.yu

Nikola Kolev
Inst. of Soil Science N. Poushkarov
Shosse Bankya Str. 7
BG-1080 Sofia
BULGARIA
nvkolev@mail.bg

Josef Kozak
Czech University of Agriculture
Kamycka 129
CZ - 165 21 Prague
CZECH REPUBLIC
kozak@af.czu.cz

Christine LE BAS (WG1)
Institut National de la Recherche Agronomique,
Av. Pomme de Pin BP 20619, Ardon
F-45166 CEDEX
FRANCE
christine.le-bas@orleans.inra.fr

Harri Lilja (WG2)

MTT
Plant Production Research, Soil and Plant Nutrition
31600 Jokioinen
Finland
harri.lilja@mtt.fi

Dr Allan Lilly
Macaulay Institute
Craigiebuckler
Aberdeen
AB15 8QH
Scotland, UK
a.lilly@macaulay.ac.uk

Sherif Lushaj (Vol)
Soil Science Institute
Instituti i Studimit të Tokave
Tirana
ALBANIA
shlushaj@abcom.al

Franc Lobnik (WG4)
University of Ljubljana
Jamnikarjeva 101
SLO - 1000 Ljubljana
SLOVENIA
franc.lobnik@bf.uni-lj.si

Donatello Magaldi
DSSNP, Facoltà di Agraria
Università di Firenze,
Piazzale delle Cascine 50144, Firenze.
ITALY
donatello.magaldi@unifi.it

Reto Giulio Meuli
Swiss Confederation Federal Department of Economic Affairs FDEA - Agroscope Reckenholz,
Tanikon Research Station ART
Reckenholzstrasse 191, CH-8046 Zürich, SWITZERLAND
reto.meuli@art.admin.ch

Gerben Mol
Alterra Green World Research
Droevendaalsesteeg 3
NL - 6708 PB Wageningen
THE NETHERLANDS
gerben.mol@wur.nl

Valentina Cotet
Agrochemistry & Environment Protection (RISSA)
Bd. Marasti, No. 61, Bucharest
Romania
vali_c76@yahoo.com

Mats Olsson
Swedish Univ. of Agricultural Sciences
Dept. of Forest Soils
Box 7001
S-75007Uppsala
SWEDEN

mats.olsson@sml.slu.se

Endla Reintam
Estonian University of Life Sciences
Department of Soil Science and Agrochemistry,
Viljandi Rd., Eerika
EST - 51014 TARTU
ESTONIA
endla@emu.ee

J.L. Rubio
European Society of Soil Conservation
Centro de Investigaciones sobre Desertificacion-CIDE
CSIC, Universitat de Valencia, Generalitat Valenciana
Cami de la Marjal, Apartado Oficial 46470 Albal, Valencia
Spain
jose.l.rubio@uv.es

S. Theocharopoulos
National Agricultural Research Foundation(NAGREF), Soil Science Institute of Athens
1 S. Venizelou str.,
GR-14123 Lykovrissi, Athens
Greece
sid_theo@otenet.gr

Dragana Vidojevic
Environmental Protection Agency
Ministry of Science and Environment Protection Republic of Serbia
Ruze Jovanovica 27a
11 160 Beograd
Serbia
dragana.vidojevic@sepa.sr.gov.yu

Borut Vrscaj
Agricultural Institute of Slovenia
Ljubljana
Slovenia
Borut.Vrscaj@kis.si

Pandi Zdruli
Mediterranean Agronomic Institute of Bari
CIHEAM-IAMB, Via Ceglie 9
I - 70010 Valenzano
ITALY
pandi@iamb.it

Tibor Tóth
Department of Soil Science RISSAC
Herman Ottó út 15
1022 Budapest
HUNGARY
tibor@rissac.hu

György Várallyay
Department of Soil Science RISSAC
Herman Ottó út 15
1022 Budapest
HUNGARY
g.varallay@rissac.hu

Erika Michéli
Szent Istvan University
Pater K.1.
H - 2100 Godollo
HUNGARY
micheli.erika@mkk.szie.hu

Endre Dobos
University of Miskolc
Institute of Geography, Dept. of Physical Geography and Environmental Sciences
3515 Miskolc-Egyetemváros,
HUNGARY
ecodobos@uni-miskolc.hu

Pinchas Fine
Ministry of Agriculture
Agricultural Research Organization, Volcani Center
Institute of Soil, Water and Environmental Sciences
P.O.B. 6, Bet Dagan 50250
ISRAEL
finep@volcani.agri.gov.il

Otto Spaargaren
ISRIC
World data Centre for soil
Duivendaal 9
6701 AR Wageningen
The Netherlands
Otto.Spaargaren@wur.nl

Willie Towers
Macaulay Institute
Craigiebuckler
Aberdeen
AB15 8QH
Scotland, UK
w.towers@macaulay.ac.uk

Peter Schad
Lehrstuhl für Bodenkunde
Department für Ökologie
Technische Universität München
D-85350 Freising
schad@wzw.tum.de

Rainer Baritz
Bundesanstalt für Geowissenschaften und Rohstoffe
Stilleweg 2
D-30655 Hannover
GERMANY
r.baritz@bgr.de

Einar Eberhardt
Bundesanstalt für Geowissenschaften und Rohstoffe
Stilleweg 2
D-30655 Hannover
GERMANY
Einar.Eberhardt@bgr.de

Dick Arnolds
USDA
Soil Survey Division
USDA-NRCS
Rm. 4252-S P.O. Box 2890
Washington, D.C.20013-2890

Marion F. Baumgardner
Department of Agronomy
Purdue University
West Lafayette, IN, United States

Michael Golden
USDA Soil Survey Division
USDA-NRCS
Rm. 4252-S P.O. Box 2890
Washington, D.C.20013-2890
michael.golden@usda.gov

John Hempel
USDA National Soil Survey Center
100 Centennial Mall North, Room 152
Lincoln, NE 68508-3866
jon.hempel@lin.usda.gov

Arwyn Jones
European Commission, Joint Research Centre
TP 280, Via E. Fermi 2749
I- 21027 Ispra (VA) Italy
arwyn.jones@jrc.ec.europa.eu

Luca Montanarella
European Commission, Joint Research Centre
TP 280, Via E. Fermi 2749
I- 21027 Ispra (VA) Italy
luca.montanarella@jrc.ec.europa.eu

Gergely Tóth
European Commission, Joint Research Centre
TP 280, Via E. Fermi 2749
I- 21027 Ispra (VA) Italy
gergely toth@jrc.ec.europa.eu