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DIRECTORATE-GENERAL ENVIRONMENT Directorate B – Natural Capital ENV.B.2 - Biodiversity

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Sixth Meeting of the Working Group on Mapping and Assessment of Ecosystems and their Services (MAES)

18 September 2013, 09:30 - 17:00

DG ENVIRONMENT

Avenue de Beaulieu 5-1160 Brussels (metro Beaulieu), BU-5 Room C

Draft AGENDA

1. Adoption of the Agenda and Minutes of the meeting of 26th April 2013

The Minutes were adopted without modification.

2. Feedback on Target 2 developments

The Commission's Communication on **Green Infrastructure** was adopted on 6th May 2013 and is currently subject to institutional discussions. The Commission highlighted its support for 'investment planning' through the Multiannual Financial Framework. The Commission intends to revive the GI Working Group to focus on the implementation of actions of the GI Strategy and share best practices at national, regional and local levels.

The results of the **Restoration Prioritization Framework** workshop held in May have been made available on circa. With regard to the future role of the RPF Working Group, the Commission is proposing to merge the activities on RPF with GI into one, consolidated working group. Restoration-related issues will also be systematically raised in the MAES WG from 2014 onwards.

The final outputs of the **No Net Loss** (NNL) Working Group are available on the Europa biodiversity webpages, and the study on policy options for the No Net Loss initiatives will be finalised soon. On the basis of these two outputs, the Commission would develop the initiative, the first step being a formal internet consultation on the main policy issues, to be launched before the end of the year.

For more information, CGBN paper on Target 2 developments has been uploaded on circa.

Discussion points

3. Thematic pilots – Draft delivery and work finalisation

- Pilot 1: Nature: DG ENV and LT

The current status of the work on Pilot 1 that is looking at the relationship between Art. 17 and MAES, was presented by Patrick Murphy. A number of inputs have been provided by EEA and ETC/BD and SIAs. There was a meeting in Paris on 11th July on the use of Art. 17 for assessments, originally not directly focused on MAES. There were lots of useful discussions on the opportunities and limitations of this dataset. What has not happened is a discussion with MS on how to use all nature data available at national level (including Art. 17) in order to do the mapping and assessment because the expert's constituency was deeply involved in the delivery of nature reports. We are now planning to organise a small workshop and invite the experts who are involved in nature reporting to discuss this in practice and promote share of experience. In any case, there will be some outputs from Pilot 1 by the end of the year, building on EEA and ETCs work with little input from MS at this stage.

- Pilot 2: Agriculture: JRC and BE

Maria-Luisa Paracchini (JRC) gave an update on progress made by pilot 2. Since last meeting, consistent progress on filing the matrix has been made with feedback received from MS (AT, DE, SK, BE plans to have a meeting on 24/9 to complete the matrix) and EU (AGRI, ENV, ESTAT, EEA). Stakeholders (FACE and ELO) sent comments. JRC also participated in the 11th July meeting to discuss the use of Art. 17 data for agroecosystems. The situation on what is feasible or not, is illustrated in the MAES matrix. In some cases, the distinction between cropland and grassland is not so straightforward. There are important challenges because agriculture is monitored in depth but rather the pressures and drivers and not in terms of ecosystem services; also the definition of ecosystems depends very much on the data used (e.g. UAE in agricultural statistics); Integrated Administration & Control System - IACS data is not accessible in most MS (only AT mentioned it); the next steps is to move from DPSIR framework, which strongly conditions MAES, towards ecosystem services since what we are interested in is how agriculture is increasing or preventing the provision of ecosystem services (e.g. maintenance of soil fertility), and not so much in assessing the functioning of the service itself.

- Pilot 3: Forest: JRC, PT and SE

Jose Barredo (JRC) presented the developments made since last MAES meeting: input to the matrix was provided by BG, BG-WWF, FI, SE, ES, PT, ELO; national matrices were validated by MS and pan-European one by EU (JRC, ESTAT, EEA, ENV); all documents are available on circa and the matrix includes forest ecosystem mapping, assessment and biodiversity; a summary of the contributions from MS and stakeholders highlights some complex issues (e.g. forest biodiversity, nutrition service, mediation of waste and flows); there is also a first list of critical issues and gaps (e.g. missing data from MS, scale issue, not always plug-and-play between data, indicators and services, comparability between assessed services and ecosystems – comparison needed between pollination from forest and other ecosystems, risk of oversimplification in development of indicators, etc.); all this information will be compiled in the final report. The next step is to finalise the input of Pilot 2 in the All Pilots final report and propose pan-European indicators at country level (cf. EFDAC). It is anticipated that there would be a need to continue some of the work of Pilot 2 in 2014.

- Pilot 4: Freshwater: JRC and FR

Ana Cardoso (JRC) presented the state of progress of the freshwater pilot covering inland surface water and groundwater (cf. Water Framework Directive) but should also cover other aquatic ecosystems such as small rivers, ponds, floodplains and inland wetlands; EEA has compiled information at pan-European level on ecosystem status; recommendations have been made: basis for assessment comes from WFD but should be supplemented for freshwater habitats and species; JRC compiled the matrix for ecosystem services with contributions from Austria (lakes, groundwater), France (wetlands) and Spain (lakes, groundwater and wetlands); contributions from the ESAWADI study, the MESEU project and the support study on integration of ecosystem services approach within the WFD and Flood Directive.

- Pilot 5: Marine (including MAES Marine workshop of 19 June): JRC and FR

Francesca Somma (JRC) reminded that MAES current framework focuses more on land services than marine ones, therefore a concept note has been developed and a matrix filled in at EU-level - the marine ecosystem is divided into marine inlets and transitional water, coastal water, shelf water and open ocean; there have been input from NGOs (Oceana and Coastwatch); the matrix has been filled in by Portugal for coastal lagoons with input from FP7 LAGOONS and FP7 ARCH projects that will provide useful examples; a MAES Marine workshop was organised on 19 June to raise awareness of experts and stakeholders on the importance of mapping and assessment of ecosystems and their services in the marine environment; contributions were made by EEA, ETC/BD, Regional Seas conventions, IMP sea-basin flagship projects, NGOs, citizen science; there was input from ICES cultural services workshop, other EC services (MARKT/natural capital), collating case-studies on best-known services; examples from MS are welcome at any time (to be posted on circa if after 1 November); examples of indicators presented for the Mediterranean Sea (cf. Liquete et al., 2013); EWE model (ecosystem modelling approach) used as free online tool.

- Pilot 6: Natural Capital Accounting (including workshop of 27-28 june): EEA and BG

Kremena Gocheva presented developments since last MAES meeting and in particular the outcomes of a workshop organised by EEA in June; a detailed annotated outline for output of NCA pilot study has been agreed, EEA Workshop report available on http://biodiversity.europa.eu; a survey was launched on NCA during the summer; preliminary findings were reported; some preliminary ideas were confirmed by MS such as the fact that some countries do not have NCA set-up; multidisplinary approaches are always a challenge; methodological guidance is necessary. MS can still provide feedback on survey; currently working on the first draft of NCA pilot document that will be completed by 30 September and then sent out for consultation in October and finalised in the course of November.

Next steps:

Good progress has been made by all Pilots and examples and inputs from MS and stakeholders can still be provided until 1st November. The work of the four ecosystem Pilots will be compiled in one single document that will be examined by Pilot's co-leads at an 'All Pilots workshop' by mid-November. The final document will provide guidance on the information and indicators that can be developed and used by countries if they wish to. In case no information is available, EU can propose proxies. The preliminary outcomes of Pilots 1 and 6 will be incorporated in the guidance document but their work will need to be further elaborated in 2014 and workshops will be used to see areas where connections can be made. Coordination between Pilots will be taken into account and co-

leads will ensure consistency across ecosystems and themes. The final guidance document will be published on BISE. It is foreseen that Pilots work will continue in 2014 in order to move from data identification to data use and application.

To ensure that work will continue in 2014, especially by Member States, a letter to the Nature Directors will be sent and a dedicated agenda item on MAES will be on the agenda of their next meeting under Lithuanian Presidency in December.

4. MAES supporting contract

- Presentation and discussion of the outcomes of the MESEU contract from the first year and in-depth discussion on the plans for next contractual year (Alterra)

In his introduction, Marco Fritz insisted on that the MESEU contract is meant to provide support to MS. The MESEU approach, which is geographical based on country case-studies, is complementing the thematic approach developed by the ecosystem pilots and will therefore contribute to the consolidated report to be delivered at the end of the year.

Leon Braat presented the main outcomes of first year contract and plans for the future. Task 1 concerned 6 country cases complemented by a survey of all MS based on a common framework. The country case-studies showed that qualitative approaches (cf. Burkhard) can be used (e.g. Belgium) as well as quantitative methods or a mix of the two. From the survey, 14 responding countries have started MAES at different levels, mapping happens but is not very uniformly done and 80% involve stakeholders. Expertise is available but financial support and EU guidance is requested. From 14 countries, 50-60% are covering agro-ecosystems, 90% include forest, 20-60% freshwater and 7-30% marine. From 14 MS, recreation, food provision and water flows climate and extreme events (regulating) services are the most frequently assessed.

Task 2 looked at comparison of ecosystem status assessment across scales through species monitoring data (e.g. NL using volunteers). Task 2 covers more than Art. 17 and 12. On habitats, there is less information. The use of species (and habitats) for assessing ecosystem condition is still not very well developed.

Task 3 concerns the identification of gaps from Task 1 and is already reported on circa The material compiled will be the basis for a manual to be developed (Task 4), together with input from EEA and JRC. A proposal for a manual for EU MS was presented that could be applied to map and report. All material will be published on BISE.

Next year, country case-studies will continue, actual mapping of country ecosystems and services will be done by volunteered countries in workshops. The integration of maps at EU, national and regional scales will be explored. Task 2 will continue looking at biodiversity data through EU quick scan, assessment of CBD, EU and national reporting on biodiversity, relation between species, systems and services. Task 3 will identify gaps and provide recommendations. The manual will be a living document and will continue building on lessons learned.

In conclusion, views on priorities and on plans for next year MESEU contract can be sent to ENV before November 22nd.

5. MAES-related work to support EU cohesion policy

- Presentation by DG REGIO and JRC of preliminary outcomes for 6th cohesion report to be delivered in 2014 and discussion

Joachim Maes (JRC) presented on behalf of DG REGIO work on cities through the Land Use Modelling Platform (LUMP). Examples were shown of maps on nature-based recreational potential in Europe, pollination potential in different regions in Europe, coastline protection as natural defence (not looking at human-made infrastructure). This work will contribute to value the services delivered by Green Infrastructure (GI) and in their inclusion in the cost for GI deployment.

- 6. The use of MAES to support the other actions under Target 2 (e.g. Restoration, Green Infrastructure)
 - Presentation by the Commission of initial ideas based on examples and discussion with MS

Marco Fritz gave a presentation on how MAES can be applied to GI. He showed examples of maps from the MESEU contract from Switzerland on areas to be managed for avalanche protection, recreation, and wood production services and prioritization of certain ecosystem services that are integrated into management plans. Other examples were shown from Wales, Cataluña, Scotland, Estonia, England, the Netherlands, northern Germany and Denmark. There are lots of interesting studies going on and a certain level of coherence between levels would be useful.

Camino Liquete presented the outcomes of ETC/SIA in relation to GI that have just been completed. A conceptual framework was developed for networking GI elements. The focus was on 8 ecosystem services provided by JRC to analyse the capacity to provide regulating and maintenance services. The second part of the analysis is based on habitats for large forest-based mammals (lynx) and integration with ecosystem services. It is a test case that can only be improved with better data from national level that can be easily included in the model.

In conclusion, the Commission would like to encourage MS authorities to think more in an integrated way and enhance bundles of services through operational programmes and projects funded by structural funds in urban areas (e.g. from Cohesion Policy), rural areas (e.g. from CAP), and conservation areas (LIFE, Copernicus).

Next steps: The Commission would like to get written feedback from MS on what tools would be needed - based on examples at regional level - on how to apply mapping and assessment of ecosystems and services for GI, and on how to better link different levels for GI (e.g. national priorities for financing, regional planning, etc.).

Information points

7. National initiatives related to MAES

- Update from Germany and The Netherlands on national developments

Burkard Schweppe-Kraft (DE) informed that the German ecosystem services assessment will not be based on maps. Available maps do not show where ecosystems relevant to biodiversity conservation are and therefore cannot be used for monitoring progress on restoration and GI. The available information is in the form of statistics that cannot be mapped. Maps will be used for the further refinement of cultural services and combined with economic valuation. He also presented a table showing how restoration can be

monitored through 4-level ranking and how ecosystem services capacity can be linked to ecosystems and ranked. In conclusion, assessment will be done but not mapping.

Niek De Wit (NL) presented progress on the Dutch digital atlas of natural capital (DANK). The conceptual model used within DANK is in line with MAES. A dialogue with society has started on supply and demand. The project organisation is based on 4 sub-projects of work to be done (i.e. data, ICT methods, institutionalisation, stakeholders demands/questions). DANK is meant to be a continuous activity. Intensive interactions should take place between 4 work packages. NL will deliver by end 2014, a first version of DANK to be reported to Parliament. Stakeholders involvement is done through frontrunners (provinces, municipalities, business) to help defining terms of reference of atlas and to champion DANK. A business-case is being developed on what potential benefits might be gained using digital atlas instead of funding individual projects. A knowledge development agenda will be presented at the same time. By 2020 a complete DANK will be available and fully aggregated. NL could contribute to the policy guidance if it would be part of the whole MAES exercise.

- Other related activities (Member States, stakeholders)

Patrick Degeorges (FR) informed the participants that one chapter of the ecosystem assessment has been drafted (i.e. conceptual framework) through a seminar that has adapted the MAES framework. A scientific and technical committee has been set up under the Foundation for Biodiversity Research (Sandra Lavorel from CNRS). A stakeholder committee is meeting on 18 October to validate project and way to implement it, including the analytical framework. This stakeholder group is part of a national committee on Biodiversity, which is the political arena where all issues on biodiversity are discussed. FR has contributed to some Pilots and some national groups have been set up (e.g. WG on urban ecosystems and services, WG meeting on wetlands and freshwater). Some conclusions can be shared on circa (in French) in 2 months. The next meeting will be on assessment of ecosystem status (with colleagues from HD and WFD). A WG on marine ecosystems will focus on coral reefs and broader issues and meet before the end of the year. Other working groups are foreseen on forest and agriculture. Colleagues working on economic valuation aspects will organise a seminar around 5-6 ecosystem services. The methodology will be tested in working groups dealing with ecological valuation.

8. Other related developments:

- Information on GMES local ecosystem services-mapping related components of GIO land and related delivery from KNEU (ENV)

Josiane Masson gave an update on Copernicus, which has space and is-situ component. There are 6 services including land monitoring service. In relation to space there is development of Sentinel (Sentinel II will be launched soon) that should provide data free for all. Regarding the land monitoring service, there is a pan-European component to continue CLC. There will be 5 high resolution products (1 ha on soil sealing, forest, water, grassland and wetlands). The new coming local component is using very high resolution focusing on biodiversity hot spots. On 2013 it will be on riparian forest area mapping in support of MAES. A call for tenders will be issued in October but products will not be available before end 2014. The idea is to continue updating to see the changes. It builds on work from JRC and EEA. JRC work has a model for delineating riparian areas and we hope it will improve JRC's model and support CLC and MAES. Products will be made available through EEA platform.

Finally, there is a Regulation for Copernicus for 2013-2020 currently being discussed at EP and Council. In this frame we will be able to accommodate further requirements if

required by users (MS, EC). It is therefore important to interact with MAES WG to meet the needs. There are European services but also data available for MS themselves. There are already images available for free for MS (2012 full coverage available to all). Maybe assistance should be provided by EEA/ETC-SIA to access these data.

- Communication on Climate Adaptation recently adopted by the Commission

See http://ec.europa.eu/clima/policies/adaptation/what/docs/com 2013 216 en.pdf

9. Scientific outreach

- EPBRS Conference 15-17 May under Irish Presidency

EPBRS conclusions on the need to reinforce science-policy interface on biodiversity and ecosystem services have been included in Council conclusions of June 2013.

- First EU BON Stakeholder Round Table, 18 June 2013, Brussels

As part of GEO-BON, EU BON project has been funded by dg RTD.

- IPBES recent developments
- 6th Annual International Ecosystem Services Partnership (ESP) Conference 2013, 26-30 August, Bali, Indonesia
- Science Policy Dialogue on Ecosystem services on 14 November

Pilots co-leads are required to provide policy questions encountered during their work to RTD to help preparing for the science-policy dialogue.

10. AOB

11. Next meetings:

- CGBN, 19-20 September 2013

A report on progress made in MAES WG and next steps will be presented at CGBN.

- Biodiversity and Nature Directors meetings 3-4 December 2013 (joint segment with Water and Marine Directors on 4^{th December}), Lithuania
- MAES High-level event, 22 May 2014, Brussels
- Next MAES WG meeting on 6th March 2014.

List of attendees

6th Meeting of the Working Group on Mapping and Assessing of Ecosystems and their Services (MAES), Brussels, 18th September 2013

MEMBER STATES	Last Name	First Name	Email
Austria	Fiala	Ingeborg	Ingeborg.Fiala@lebensministerium.at
Belgium	Dendoncker	Nicolas	nicolas.dendoncker@fundp.ac.be
	Verboven	Jan	
Bulgaria	Gocheva	Kremena	k.gocheva@moew.government.bg
	Glogov	Plamen	p.glogov@moew.government.bg
Croatia	Uros	Jelena	<u>Jelena.Uros@mzoip.hr</u>
Czech Republic	Honigova	Iva	iva.honigova@nature.cz
Denmark	Juul Jensen	Eva	EJJ@nst.dk
Estonia	Klein	Lauri	lauri.klein@envir.ee
Finland	Jäppinen	Jukka- Pekka	jukka-pekka.jappinen@ymparisto.fi
France	Degeorges	Patrick	Patrick.Degeorges@developpement-durable.gouv.fr
	Beaufaron	Guéhanne	Guehanne.beaufaron@i-carre.net
	Puydarrieux	Philippe	Philippe.Puydarrieux@developpement-durable.gouv.fr
Germany	Schweppe-Kraft	Burkhard	SchweppB@BfN.de
Germany	Wittmer	Heidi	heidi.wittmer@ufz.de
Hungary	Bálint	Czúcz	czucz@botanika.hu
Malta	Borg	Duncan	Duncan.Borg@mepa.org.mt
Netherlands	De Wit	Niek	Niek.de.wit@minienm.nl
	Goedhart	Ton	A.F.F.Goedhart@mineleni.nl
Poland	Reklewski	Jan	Jan.reklewski@mos.gov.pl
Portugal	Pedroso	Cristina	cristina.pedroso@icnf.pt
	Silva	Mario	msilva@icnb.pt
Spain	Pineiro Lopez	Tania	tlopezp@magrama.es

	Bengtsson	Jan	Jan.Bengtsson@slu.se
Sweden	Moen	Jon	jon.moen@emg.umu.se
	Ostergard	Hannah	Hannah.Ostergard@naturvardsverket.se
United Kingdom	Smith	Matt	Matt.Smith@jncc.gov.uk
OBSERVERS	Last Name	First Name	Email
Norway	Gudding	Petter Andreas	Petter.andreas.gudding@miljodir.no
EXPERTS	Last Name	First Name	Email
RUBICODE	Berry	Pam	pam.berry@eci.ox.ac.uk
UNEP-WCMC	Brown	Claire	Claire.Brown@unep-wcmc.org
UAVR Portugal	Lillebø	Ana	lillebo@ua.pt
UC Louvain	Radoux	Julien	Julien.radoux@uclouvain.be
STAKEHOLDERS	Last Name	First Name	Email
ELO	Jazy	Josef	Josef.jazy@elo.org
European Anglers Alliance (EAA)	Kappel	Jan	jan.kappel@eaa-europe.eu
FACE	Simon	Charlotte	charlotte.simon@face.eu
UNEP	Emond	Jennifer	jennifer.emond@unep.org
WWF	Todorova	Maya	mtodorova@wwfdcp.bg
WWF-Romania	Martini	Monia	mmartini@wwfdcp.ro
EU	Last Name	First Name	Email
EEA.NSV.1	Larsen	Frank Wugt	Frank.Larsen@eea.europa.eu
EEA.NSV3	Meiner	Andrus	Andrus.Meiner@eea.europa.eu
EEA.NSV3	Erhard	Markus	Markus.Erhard@eea.europa.eu
EEA.IEA1	Petersen	Jan-Erik	Jan-Erik.Petersen@eea.europa.eu
ETC/BD	Condé	Sophie	conde@mnhn.fr
ETC/BD partner ECNC	Marin	Amor Torre	torremarin@ecnc.org
ETC/SIA	Kleeschulte	Stefan	Kleesschulte@geoville.com
	Liquete	Camino	Liquete@geoville.com
AGRI	Mola	Bruno	Bruno.Mola@ext-ec.europa.eu

ENV.B2	Murphy	Patrick	Patrick.Murphy@ec.europa.eu
ENV.B2	Teller	Anne	Anne.Teller@ec.europa.eu
ENV.B2	Ledoux	Laure	Laure.Ledoux@ec.europa.eu
ENV.B2	Fritz	Marco	Marco.Fritz@ec.europa.eu
ENV.F3	Masson	Josiane	Josiane.Masson@ec.europa.eu
JRC.H08	Maes	Joachim	joachim.maes@jrc.ec.europa.eu
JRC.H03	Ostermann	Ole	ole.ostermann@jrc.ec.europa.eu
JRC.H04	Paracchini	Maria- Luisa	Luísa.paracchini@jrc.ec.europa.eu
JRC.H01	Somma	Francesca	Francesca.Somma@jrc.ec.europa.eu
JRC.H01	Grizzetti	Bruna	bruna.grizzetti@jrc.ec.europa.eu
JRC.H01	Egoh	Benis	benis.egoh@irc.ec.europa.eu
JRC.H03	Barredo	Jose	Jose.Barredo@jrc.ec.europa.eu
JRC H01	Cardoso	Ana	ana-cristina.cardoso@irc.ec.europa.eu
REGIO	Monfort	Philippe	Philippe.Monfort@ec.europa.eu
RTD.103	vandewoestijne	Sofie	Sofie.vandewoestijne@ec.europa.eu
Consultants	Last Name	First Name	Email
MESEU	Braat	Leon	leon.braat@wur.nl
MESEU (Member of Steering Committee)	Mizgajski	Andrzej	mizgaj@amu.edu.pl
ARCADIS	Lammerant	Johan	j.lammerant@arcadisbelgium.be