Guidance for reporting Cropland Management, Grazing Land Management, Revegetation and Wetland Drainage and Rewetting under Art 3(2) and 3(3) of EU LULUCF Decision 529/2013

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**Expertise:**
- Technical  
- Economic  
- Policy  
- Developing guidance documents
The guidance documents on Art. 3(2) and 3(3)

1. Final guidance on reporting and accounting for cropland and grassland management in accordance with Article 3(2) of EU Decision 529/2013/EU.

2. Final guidance on reporting and accounting for Revegetation and Wetland Drainage and Rewetting Activities in accordance with Article 3(3) of EU Decision 529/2013/EU.
CM and GM Guidance under Article 3(2)
CM and GM guidance: Structure and contents

Chapter 1: Introduction and User Guide

Part A: Getting Started and Planning Improvements
- Chapter 2: Overview of current state of reporting on cropland and grassland
- Chapter 3: First steps towards moving from land-based to activity-based reporting
- Chapter 4: Planning improvements - setting priorities

Part B: Detailed guidance
- Chapter 5: Improving the quality of activity data
- Chapter 6: Improving the accuracy of emission factors
- Chapter 7: Organisational and operational issues

Chapter 8: Further information and reference materials

Annex 1: Carrying out an initial assessment for a key category - the case of Germany

Annex 2: Current state of reporting on cropland and grassland
• Addressing the MS needs (Chapter 2, Annex 2)
  – Current state of reporting on cropland and grassland based on review of 2014 submissions and questionnaires to inventory agencies and experts in summer 2014
  – Identification and classification of the most common and most critical needs and of interesting (low-budget) solutions, which could also work elsewhere
  – Basis for the guidance and for estimating timelines and costs of necessary improvements
CM and GM guidance Part A

- First steps from land-based to activity based reporting (Chapter 3)
- A roadmap for a process of one to two weeks to build on existing information, identify and prioritize improvements
  - Definitions, data, calculations (based on IPCC Guidelines)
    - CM and GM definitions
    - Land stratification and subcategories
    - Key categories, significant pools and trends (including improvements, see also chapter 4 and Annex 1)
  - Calculations
    - Descriptive text (based on IPCC Guidelines for KP reporting)
    - Creating accounts to determine the overall impacts of the GHG mitigation measures
• Planning improvements – setting priorities (Chapter 4, Annex 1)
  – Tier 1 questions and assessment with existing information to identify key categories, significant pools and important trends
  – Matching CM and GM reporting with the impact assessment of LULUCF policies and measures (which carbon pools matter?)
  – Case study of Germany (Annex 1)
Main message: Activity data are MS specific but methodologies can be shared

Most common issues and solutions

- How to use one assessment system for LULUCF over time
  ~ Medium effort (< 4 years)

- How to consider land-use changes before 1990
  ~ Low to medium effort (< 2 years)

- How to work with different activity data sources
  ~ Low to medium effort (< 2 years)
Completeness and consistency of time series of activity data

- Expanding the LUC assessment system from one region / land-use category to the whole country
- Finding activity data
  Broad exploration of all available information sources on (historic) land-use and land-cover including geographic data, agricultural statistics, proxies, expert judgement
- Making historic data compatible with current systems by splicing techniques
- Potential of IACS/LPIS
- Solutions by MS (finished and planned ones): concrete cases
e.g. by remote sensing, national forest inventory ...
CM and GM guidance Part B: Activity data

Reporting subcategories of cropland, grassland and land-use changes with these sub-categories

• Solutions for tracking land-use changes between cropland and grassland, between e.g. annual and perennial crops

• Potential of IACS/LPIS

• Solutions by MS (finished and planned ones): concrete cases
CM and GM guidance Part B: Activity data

Reporting the management activities on cropland and grassland for soil C stock changes in the “remaining” categories

• Maybe most challenging and relevant for (future) LULUCF measures
• Practical solutions based on e.g. agricultural statistics
• Potential of IACS/LPIS
• Solutions by MS (finished and planned ones): concrete cases
Key elements of improvements

• Coordination and cooperation with national institutions who hold historic, present and future data on land-use, agriculture and soil
• Establish efficient data sharing and exploitation mechanisms
• Mobilize historic information (one-time effort)
• Guidance contains methodologies and national solution examples

→ Organisational rather than scientific challenge
Main message: Emission factor values, data and methodologies can be shared if MS prove that they meet their national circumstances

Guidance structured by carbon pool
CM and GM guidance Part B: Emission factors

- Woody biomass: relatively simple and not so country-specific

- Mineral soils:
  - Reference C stocks in mineral soils: national data needed
  - Relative C stock changes, response functions: not so country-specific but proof is needed that national circumstances are comparable in terms of soil type, climate and management

- Organic soils: There is so much past and ongoing research in Europe that it is not necessary to start intensive new measurements but rather to transfer the available knowledge and response functions to the national conditions

~ Low effort (< 1 year)

~ Low effort with national data (< 1 year) to
High effort without past or running national soil inventory or soil monitoring programme

~ Low effort with national data (< 1 year) to
Medium effort without past or running national research
CM and GM guidance Part B: Emission factors

Key elements of improvements

• Coordination and cooperation with national institutions, INTERNATIONAL INSTITUTIONS AND NEIGHBOUR COUNTRIES who hold data on land-use, agriculture and soil

• Establish efficient data sharing and exploitation mechanisms

• Mobilize historic information (one-time effort)

• FILL GAPS IN NATIONAL MONITORING

• Guidance contains methodologies and national solution examples

→ Organisational AND scientific challenge
Organisational and operational issues

• Exploring and including relevant national expertise
• Co-operation between Member States
• Perspectives from international and EU wide assessment systems and projects
  • IACS, LPIS
  • Farm structure survey
  • LUCAS
  • Corine Land Cover
  • European Soil Data Base
CM and GM: Typical efforts and timelines

Annex 2: Current state of reporting on cropland and grassland

Improving activity data

• Find and use past data and expertise → months
• Process, improve existing data and systems → < 2 years
• Historic data from analogous, decentralized archives → up to 4 years
• Establish and use future data streams in reporting (e.g. expand NFI, use LPIS ...) → 1 month / year
CM and GM: Typical efforts and timelines

Annex 2: Current state of reporting on cropland and grassland

Improving emission factors

• Biomass stocks and growth functions  \(\rightarrow\) < 1 year

• Mineral soil C stocks with existing national monitoring  \(\rightarrow\) < 2 years

• New mineral soil monitoring in cropland and grassland
  multi-purpose basic environmental data; once or in long periodical intervals;
  e.g. expand the well-established forest soil monitoring  \(\rightarrow\) several years

• Organic soils, from research to inventory (joint effort)  \(\rightarrow\) < 2 years

\(\rightarrow\) One-off or periodical activities.
RV and WDR Guidance under Article 3(3)
RV and WDR guidance: Structure and contents

Chapter 1: Introduction and user guide

Chapter 2: Revegetation

Chapter 3: Wetland Drainage and Rewetting
RV guidance structure

- Current Reporting on Revegetation (Romania, Iceland, Japan)
- Activities with potential for Revegetation
- Current reporting on Woody biomass outside forests
e.g. hedgerows, urban trees
- Qualitative assessment of Revegetation potential in EU MS
- Revegetation reporting in the base year
- Guidance for Revegetation Reporting
  Activity data, methodologies, emission factors for woody biomass
- Addressing organisational and operational issues
WDR guidance structure

- Useful IPCC Guidance
  2013 KP Supplement, 2013 Wetlands Supplement

- Activities with potential for WDR and reporting challenges

- Current Reporting of organic soils and Wetlands
  Definition of organic soils, stratification by drainage status, Wetlands reporting

- Qualitative assessment of mitigation potential by WDR in EU MS
  - Theoretical maximum assuming that all relevant organic soils have been drained before 1990
  - Policies and legislation with synergies for WDR

- Guidance for WDR Reporting
  Area and properties of organic soils, drainage status, emission factors for drained and rewetted organic soils, non-significant carbon pools and arguments for “not a source”

- Addressing organisational and operational issues
Thank you for your attention

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