Framework Convention on Climate Change

Report of the technical assessment of the forest management reference level submission of Greece submitted in 2011

Contents

I.   Introduction and summary

A.   Overview

1.   This report covers the technical assessment (TA) of the submission of Greece on its forest management reference level (FMRL), submitted on 21 April 2011 in accordance with decision 2/CMP.6, and its revised FMRL in response to the recommendations in the initial draft review report submitted to the expert review team (ERT) on 22 July 2011. The TA took place (as a centralized activity) from 30 May to 3 June 2011 in Bonn, Germany, and was coordinated by the UNFCCC secretariat. The TA was conducted by the following team of nominated land use, land-use change and forestry experts from the UNFCCC roster of experts: Mr. Aquiles Neuenschwander (Chile), Ms. Oksana Butrim (Ukraine), Mr. Mamadou Khouma (Senegal), Mr. Kyeong-hak Lee (Republic of Korea), Mr. Doru Irimie (Romania) and Ms. Anke Benndorf (Germany). Mr. Aquiles Neuenschwander and Ms. Oksana Butrim were the lead reviewers. The TA was coordinated by Ms. María José Sanz-Sánchez (UNFCCC secretariat).

2.   In accordance with the "Guidelines for review of submissions of information on forest management reference levels" (decision 2/CMP.6, appendix II, part II), a draft version of this report was communicated to the Government of Greece, which provided comments that were considered and incorporated, as appropriate, into this final version of the report.

B.   Proposed reference level

3.   In its submission of 21 April 2011, Greece proposed an FMRL based on projections of –1.56 million tonnes of carbon dioxide equivalent (Mt CO_2 eq) per year applying a first-order decay function for harvested wood products (HWP) and –0.80 Mt CO_2 eq per year assuming instantaneous oxidation of HWP. Decay of HWP accounts for removals of 0.76 Mt CO_2 eq per year. In response to the initial draft report of the TA, Greece proposed a revised FMRL of –1.83 Mt CO_2 eq per year including emissions from forest fires and excluding HWP, which is based on the average removals during the historical time series (1990–2009) rather than projections. Furthermore, the Party indicated that the FMRL may be revised if and when additional data become available. This revision is required because the model used to construct the original FMRL, G4M (Global Forestry Model)[1] from the International Institute for Applied Systems Analysis, could not provide credible FMRL projections for Greece (see para. 4 below for further details). The ERT assessed the revised FMRL using historical data on net removals for forest land remaining forest land as reported in the national inventory report (NIR) 2011, which gives average removals of –1.81 Mt CO_2 eq per year for the period 1990–2009. The ERT recommends that the Party consider this slight discrepancy, and resubmit an FMRL that is consistent with the 2011 NIR. The ERT also recommends that the Party resubmit additional information in accordance with the "Guidelines for submissions of information on forest management reference levels" (decision 2/CMP.6, appendix II, part I) to support the revised FMRL.

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[1]   The G4M model relies on spatial data. These data may or may not have been provided by countries. Other forest and forest management parameters (e.g. age-class structure, increment and historical harvest) were taken from national forest inventories or other country statistics.

II.   General description of the reference level

A.   Overview

4.   Greece is one of the member States of the European Union (EU) for which the Joint Research Centre (JRC) of the European Commission developed projections in collaboration with two EU modelling groups. In the common approach of the EU, the models, G4M and EFISCEN (European Forest Information Scenario Model)[2] from the European Forest Institute, project annual estimates of emissions and removals for forest management up to 2020 for the above- and below-ground biomass carbon pools. To estimate the FMRL, the emissions and removals estimated by the models for the time series 2000 to 2020 were calibrated/adjusted using historical data from the Party for the period 2000–2008.[3] The G4M model could not project a credible FMRL for Greece with the information Greece has available, owing to lack of data on age-class structure; therefore, the Party opted for a more conservative approach and resubmitted a revised FMRL based on the average removals from the historical time series (1990–2009).

B.   How each element of footnote 1 to paragraph 4 of decision 2/CMP.6 was taken into account in the construction of the reference level

1.   Historical data from greenhouse gas inventory submissions

5.   The historical data used for the calculation of the FMRL come from Greece's 2011 NIR. Emissions and removals of greenhouse gases (GHGs) from areas under forest management for the period 1990–2009 were used, which is consistent with the GHG inventory for forest land remaining forest land estimated and reported only for managed forests (as described in para. 13 below).

2.   Age-class structure

6.   No recent data for age-class structure were available.

3.   The need to exclude removals from accounting in accordance with decision 16/CMP.1, paragraph 1

7.   This is partly achieved by the provisions for factoring out (as described in para. 19 below).

C.   Pools and gases

1.   Pools and gases included in the reference level

8.   Above- and below-ground biomass are included in the FMRL. Litter, dead wood and soil organic carbon are not included, as Greece does not consider them to be a source. Non-CO_2 GHGs from forest fires are included. Emissions from fertilization, liming and drainage

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[2]   EFISCEN uses as data input the forest area data from national forest inventories scaled to match the forest area reported in the national inventory report (the forest land remaining forest land area, from which the deforested area is deducted, or the forest management area if elected under the Kyoto Protocol) and provides projections on basic forest inventory data (stem wood volume, increment, age-class structure, as well as carbon in forest biomass and soil).

[3]   2008 forest management data are taken as provided by the Party in its 2010 greenhouse gas inventory submission. The forest management estimates for 2000 to 2007 were provided in a communication from the Party in March 2011.

are not estimated, as these activities are not practised in Greece owing to economic and/or ecological reasons.

2. Consistency with inclusion of pools in the estimates

9.   In its NIRs submitted in 2010 and 2011 Greece stated that carbon stock changes from dead organic matter and soils have not yet been assessed. The ERT notes that, when reporting forest management for the first commitment period, pools are to be excluded only when it can be demonstrated, in accordance with the Intergovernmental Panel on Climate Change *Good Practice Guidance for Land Use, Land-Use Change and Forestry*, that these are not a source. The inclusion of pools in Greece's FMRL is consistent with the inclusion of pools in the submitted national GHG inventories in the NIRs and Greece does not intend to include them in the future commitment periods.

D.   Approaches, methods and models used

1.   Description

10.   During the TA and after receiving initial recommendations from the ERT, Greece abandoned its original FMRL projection, developed by the JRC, and proposed a revised FMRL using a conservative approach. The conservative approach adopted by the Party is based on the average removals from the area under forest management during the 1990–2009 period.

2.   Transparency and consistency

11.   Although the description related to the approach used in calculating the revised FMRL (i.e. -1.83 Mt CO_2 eq per year) is consistent with the time series data as presented in the 2011 NIR (with a slight discrepancy between the values calculated by the ERT and those calculated by the Party), the ERT believes that transparency would be greatly increased if the Party submitted information relating to the revised FMRL (e.g. age-class structure, annual increment, rotation age, assumed harvesting rates and HWP) as requested in the "Guidelines for submissions of information on forest management reference levels" referred to in paragraph 3 above.

E.   Description of the construction of the reference level

1.   Area under forest management

12.   The area under forest management in 2009 as reported in the 2011 NIR (page 318) was 1.167 thousand hectares (kha).

2.   Relationship of the forest land remaining forest land category with the forest management activity reported previously under the Convention and the Kyoto Protocol

13.   The ERT noted that the area of forest land remaining forest land reported under the Convention (3.356 kha for the year 2009 as reported in the 2011 NIR) is different from the forest management area reported under the Kyoto Protocol (1.167 kha for the year 2009 as reported in 2011 NIR). This is because only those forests included in a forest management plan, which started in 1990 or later, have been included in the forest management activity under Article 3, paragraph 4, of the Kyoto Protocol (see section 10.5.1 of the 2011 NIR). GHG emissions and removals for forest land remaining forest land under the Convention in the 2011 NIR are only for managed forests that have been managed with a forest

management plan (see section 7.2.2 of the 2011 NIR). Hence, the inventory for forest land remaining forest land under the Convention is equal to that for forest management land under the Kyoto Protocol.

3. Forest characteristics

14. The main floristic regions found in Greece are Mediterranean, European (Eurasian) and Irano–Caspian. The Mediterranean flora is found in a zone of varying width along the coasts and on the islands of the Ionian and Aegean Seas. The width of this zone and the altitude to which it reaches decrease with increasing latitude. The European (Eurasian) flora predominates in the mountains of Northern and Central Greece, gradually decreasing in occurrence on the way southwards. Representatives of Irano–Caspian flora, such as the oriental oak, are found in North-East Greece (Thrace) and on the islands of the North-East Aegean (as reported in Greece's fifth national communication).

15. During the TA, the Party explained that the silviculture methods in Greece are adapted to an uneven-aged class distribution, as the forest ecosystems are ecologically stabilized and less vulnerable to risks. During the first national inventory, age was not measured, and a second more complete inventory has yet to be conducted. Consequently, Greece is presently unable to provide data on the age-class structure of its forests.

4. Historical and assumed harvesting rates

16. No information was provided.

5. Harvested wood products

17. No information was provided. Furthermore, the ERT noted that HWP are not accounted for in the revised FMRL based on the historical time series.

6. Disturbances in the context of force majeure

18. Greece did not consider force majeure in the construction of the FMRL. The ERT noted that in using the average of historical removals for setting the FMRL, past disturbances are thereby incorporated into the FMRL.

7. Factoring out

19. The use of a projected reference level which includes age-class structure is considered to factor out dynamic age-class effects. As Greece did not have access to or the means to provide information on age-class structure it was difficult to assess whether or not dynamic age-class effects can be factored out. The newly proposed FMRL is based on historical removals; with the present state of scientific knowledge, the effects of elevated CO_2 concentrations and indirect nitrogen deposition occur in the reference level and in the estimated period (i.e. the commitment period), and therefore they can be assumed to factor out. The dynamic age-class effects will remain over any given commitment period but may eventually be removed from accounting by cancelling out over successive commitment periods.

F. Policies included

1. Description of policies

20. No description of national policies was provided.

2. **How policies are taken into account in the construction of the reference level**

21.   As Greece did not provide information on national policies, there is no way of verifying whether or not policies are taken into account in the proposed FMRL. The ERT requests the Party to verify whether or not domestic polices implemented not later than December 2009 are implicitly taken into account in the FMRL, based on the approach used.

III.   Conclusions and recommendations

22.   In its FMRL submission, Greece calculated an FMRL based on the projections of net emissions provided by G4M. The ERT noted a significant inconsistency in the area under forest management used by G4M and the forest management area reported in the 2011 NIR under Article 3, paragraph 4, of the Kyoto Protocol. Furthermore, Greece was unable to provide information on age-class structure, thinning and rotation age, which are used as basic inputs for G4M. The ERT had concluded that owing to the lack of or unavailability of basic data, a TA of the FMRL could not be completed. The ERT recommended that the Party provide the above-mentioned data in order to complete the assessment. Furthermore, the ERT recommended that Greece provide the latest available information on soil organic carbon and dead organic matter, as well as justification for the assumption that they are not a source of GHG emissions.

23.   In response to these recommendations, the Party indicated that since the G4M model could not produce credible projections for an FMRL for Greece it proposed a revised FMRL of -1.83 Mt CO_2 eq per year (which is the average removals for the period 1990–2009 including emissions from forest fires). The ERT assessed the revised FMRL using historical data on net removals for forest land remaining forest land contained in the 2011 NIR and found that the average removals for the period 1990–2009 were -1.81 Mt CO_2 eq per year. The ERT advises the Party to consider this slight discrepancy, and resubmit an FMRL that is consistent with the 2011 NIR.

24.   Complementary information to support the revised FMRL was not provided in accordance with the "Guidelines for submissions of information on forest management reference levels". The ERT encourages the Party to document and resubmit information used in constructing the revised FMRL in accordance with the guidelines. In this respect, the ERT recommends that Greece:

     (a)   Submit information on age-class structure, increment, rotation age, assumed harvesting rates and HWP, as well the information on soil organic carbon and dead organic matter referred to in paragraph 22 above;

     (b)   Verify whether or not domestic polices implemented not later than December 2009 are implicitly taken into account in the proposed FMRL.

Annex

Documents and information used during the technical assessment

Reference documents

Submission of information on forest management reference levels by Greece, 21 April 2011. Available at <http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/awgkp_greece _fmrl_2011.pdf>.

National greenhouse gas inventory of Greece submitted in 2010. Available at <http://unfccc.int/5270.php>.

National greenhouse gas inventory of Greece submitted in 2011. Available at <http://unfccc.int/5888.php>.

Fifth national communication of Greece. Available at <http://unfccc.int/resource/docs/natc/grc_nc5.pdf>.