

*JRC technical workshop on LULUCF reporting under the Kyoto Protocol*

## KP-LULUCF reporting and 2010 review main findings

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## KP-LULUCF reporting

No “Saturday paper” during the UNFCCC review.

## KP-LULUCF reporting

A growth model is used to estimate the net change of carbon in above- and below-ground biomass, dead wood, litter and soils; the model computes annual tree-volume increments, and uses country-specific biomass expansion factors and tree parameters. Regressions between above-ground carbon stocks and either litter or soil carbon stocks have been used. The model was applied at a regional scale. Input data for the forest area per region and inventory typologies were from the national forest inventories. Model outcomes were used as basis for determining carbon stock changes from activities under Articles 3.3 and 3.4.

Italy implements reporting method 1 for lands subject to activities under Articles 3.3 and 3.4. The boundaries of the reporting areas have been identified in line with the administrative boundaries of the Italian regions (NUTS2). The same geographical boundaries were used for activities under both Articles 3.3 and 3.4.

Only forest management has been elected under Article 3.4. All forests fulfilling the definition of forest are considered as managed and are under forest management. The entire Italian forest area is therefore considered to be managed forest land.

## Activities under Article 3.3 of the Kyoto Protocol

The ERT identified inconsistencies in the IEF used for the estimation of carbon stock change in living biomass and soils between the reporting under the Convention and the art. 3.3 reporting; the inconsistencies are due to some calculation errors identified by Italy after the official submission and result in an underestimate of carbon stock changes reported under KP respect the Convention.

Italy has planned to revise the estimation model used on the basis of the new data coming from the national registry for forest carbon sinks.

The total area deforested since 1990 is 386 kha. A conservative approach has been used to estimate the carbon stock changes in deforested areas, assuming and that carbon existing in the different pools before deforestation is lost.

## Activities under Article 3.4 of the Kyoto Protocol

Tier 2 methods are used to estimate carbon stock changes in all carbon pools. A tier 1 method, with country-specific AD, is used to estimate non-CO<sub>2</sub> emissions from biomass burning.

Uncertainty related to the different carbon pools, taking into account the error propagation, is rather high. Outcomes from the activities planned in the framework of *national registry for forest carbon sinks* will be useful to improve the input data and the estimation methods, reducing uncertainty.

# Review main findings

## ERT's conclusions:

- Italy's annual submission on KP-LULUCF is in accordance with the requirements of paragraphs 5 to 9 of the annex to decision 15/CMP.1.
- Methods of estimating carbon stock changes have been applied taking into account the IPCC good practice guidance for LULUCF and recognizing the principles laid out in decision 16/CMP.1.
- Carbon stock changes as a result of the activities under Articles 3.3 and 3.4 are estimated using the same methods as used for the LULUCF inventory.

## Critical issues of KP-LULUCF reporting

Italy have identified a series of critical issues related to KP reporting, as:

- need to use remote sensed data to create a reliable informative basis (i.e. to assess land areas, to report the land use categories), consistent with the IPCC methodologies and definitions.
- need to track land use changes on a spatial basis;
- needs of more consistent informative basis on soils and dead mass carbon pools;

To address these issues, the *national registry for carbon sinks* has been designed and included in the Italian national system. The activities of the registry are ongoing. Outcomes will allow a remarkable improvement of the reporting.

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**Thanks for your attention**

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