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We read with great interest the Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015 and take note of some of the differences between this version of the inventory and past versions. The net increase in carbon stocks from the Land Use, Land-Use Change and Forestry sector has been revised downward to approximately 390 MMT of CO<sub>2</sub>e over the years 2013 to 2015 (page ES-20) from a value that was approximately twice this in past versions of the inventory (~790 MMT CO<sub>2</sub> Eq.). In the current Draft Inventory, Land Converted to Grassland represents the largest source of emissions from the LULUCF sector. Reading further, we see that revisions and recalculations in the Forest Land Converted to Grassland category accounted for an increase in carbon losses of 273 MMT CO<sub>2</sub>e, or a 673% increase compared to previous estimates (page 6-76).

It is our understanding that this version of the inventory is the first to explicitly (and correctly) follow IPCC Guidelines to account for land converted to grassland and land converted to settlements as separate categories. While we commend and fully support continued efforts by the inventory team to reduce overall uncertainties in GHG fluxes from LULUCF and to use data and methods that bring US reporting into closer alignment with international guidance, as it currently stands it is challenging to understand the revisions that have led to this large discrepancy with past inventories. Given that transparency and accountability will be critical factors in the successful implementation of the Paris Agreement, we encourage further explanation of these changes in the final draft. We make two notes below about this revision and accompany these notes with suggestions and requests for clarification.

- **Area of forest land converted to grassland.** Table 6-7 indicates that nearly 4.6 million hectares of forest land were converted to non-forest land each year over the last five years, 4 million hectares of which were converted to grassland. This number seems high, given that forest land to grassland conversion in the lower 48 states between 2006 and 2011 was approximate 1 million ha/yr on average, as estimated from NLCD data. While we recognize the mismatch in years of analysis (2006-2011) and that NRI rather than NLCD is the source of data used for estimating this conversion type in the lower 48 states, the rate of conversion of forest land to grassland estimated using NRI data is about four times higher than estimates derived from NLCD. The acknowledgement of this difference, as well as the inclusion of some language of clarification in the inventory, seems warranted. Given the combination of data sources used in the inventory to represent the U.S. land base, it is also unclear in the inventory draft how much, if any, of this forest land to grassland conversion

occurred in managed lands in Alaska, where NLCD is the data source used to determine transitions yet no NLCD data are currently available for years past 2011. The 2001 to 2011 NLCD product estimates that approximately 0.3 million ha/yr of forest land is converted to grassland in Alaska. Notwithstanding this fact, it is our experience that changes in land cover, as provided by the NLCD, are not always changes in land use. Specifically, a loss of tree cover associated with a clear cut harvest can appear in NLCD as a change from forest land to grassland, but if the land is intended to regrow into forest, the land use is to remain forest land. It is also our understanding that emissions associated with harvest are accounted for in the Forest Land Remaining Forest Land and Harvested Wood Pools section (pages 6-23, 6-24). While we have no evidence of double counting here, we want to note this possibility and request clarification.

- **Carbon Stock Change Factor for forest land converted to grassland.** An additional key factor in reporting carbon stock changes resulting from the Conversion of Forest Land to Grassland is the stock change factor and associated reporting assumptions applied. Forest lands typically have significantly higher above- and below- ground biomass densities than grasslands and thus conversion from forest land to grassland can result in high carbon losses. It is our understanding that the draft inventory makes use of measurements from FIA plots to estimate the forest land above ground forest carbon density and an IPCC Tier 1 default value for the post-change above ground grassland carbon density. This IPCC default, represented as an average value (+/- uncertainty) across a broad ecoregion type, may not be representative of the average measured carbon density in US grassland ecosystems. If IPCC defaults are substantially lower than measured C densities in US grasslands the result would be an overestimate of carbon loss from this transition. IPCC Guidelines encourage the use of Tier 2 country-specific factors where available. We encourage the inventory team to explore the use of a carbon density value of grasslands that accurately represents US grasslands to replace the IPCC default in the case of transition of forest land to grassland.