**LULUCF: Sector Lead Roles and Responsibilities**

In implementing institutional arrangements for the National Greenhouse Gas (GHG) Inventory, it is important to communicate responsibilities to all contributing staff. This document describes the major roles and responsibilities for the **Land Use, Land Use Change, and Forestry** (**LULUCF) Sector Lead**, whose primary role will be to manage and coordinate development of GHG emission/removal estimates in the LULUCF sector.

This document is part of EPA’s [Toolkit for Building National GHG Inventory Systems](http://ledsgp.org/resource/greenhouse-gas-inventory-system/?loclang=en_gb#ghg-toolkit) (“Toolkit”), which key members of a national inventory team may use to design and develop a sustainable inventory system. In addition, it complements EPA’s *Templates for Creating a National GHG Inventory System Manual*, also within the Toolkit. Specifically, the LULUCF Sector Lead is encouraged to use this template in conjunction with Template 2: Institutional Arrangements.

## The LULUCF Sector Lead Should Understand:

* the specific responsibilities of the LULUCF Sector Lead, including a clear understanding with its immediate supervisor/organization and the National Inventory Coordinator (NIC) on their role in producing the LULUCF GHG estimates for the inventory,
* the expected and required deliverables and timeline for the submission of each deliverable,
* the estimated amount of time necessary to complete the tasks of the LULUCF sector,
* the budget, as institutional arrangements and national circumstances dictate, such as the funds allocated by your immediate supervisor or the NIC to develop the LULUCF sector GHG estimates, and how these funds may be utilized in support of developing and documenting the LULUCF estimates, and
* the IPCC Guidelines for this sector, including default methods, data sources, basic QA/QC, uncertainty assessment, and reporting procedures.

##  LULUCF Sector Preparation

* Review the Consultative Group of Experts’ (CGE) materials related to the LULUCF sector. [[CGE Materials](http://unfccc.int/national_reports/non-annex_i_natcom/training_material/methodological_documents/items/349.php)]
* Review the LULUCF section of the IPCC Guidelines to understand the default methods, data sources, basic QA/QC, uncertainty assessment, and reporting procedures. [[2006 IPCC Guidelines](http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html)]
* Review the UNFCCC guidance materials for additional information. [[UNFCCC Guidance](http://unfccc.int/national_reports/non-annex_i_natcom/guidelines_and_user_manual/items/2607.php)]
* Review the LULUCF section of the previous National GHG Inventory for your country and other reports relevant to national GHG estimates for this sector. Reviewing the LULUCF section from other country’s GHG inventory reports can also be informative.
* Understand which categories in the LULUCF sector were identified as key categories in the previous inventory.
* Review the EPA’s *Templates for Creating a National Greenhouse Gas Inventory System Manual* and additional Toolkit materials available on the GHG Inventory Capacity Building portal. [[EPA Toolkit for Building National GHG Inventory Systems](http://ledsgp.org/resource/greenhouse-gas-inventory-system/?loclang=en_gb#ghg-toolkit)]
* Use software packages, if applicable, that are relevant and useful for this sector ([IPCC Inventory Software](https://www.ipcc-nggip.iges.or.jp/software/index.html) or relevant country-specific software used in compiling previous inventories for this sector).
* Be familiar with the role of the GHG inventory in UNFCCC reporting processes (e.g., National Communication (NC), etc.).

## LULUCF Sector Responsibilities and Activities

* Review the *2006* [*IPCC Guidelines*](http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html) *for National Greenhouse Gas Inventories* and previous IPCC Guidelines, if applicable, such as *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.*
	+ Understand the GHG categories that are sources/sinks in the LULUCF sector.
	+ At minimum understand the Tier 1 methodologies, data needs, and other requirements for developing GHG estimates for the LULUCF sector, and become familiar with those for Tier 2.
* Collaborate with the NIC to manage the LULUCF sector budget and develop a LULUCF sector-specific work plan and schedule that coincides with deliverables acknowledged in the overall National Inventory Schedule.
* Develop and implement a LULUCF sector-specific plan for archiving all relevant information and materials, in coordination with the archiving coordinator and adhering to any existing archiving guidance materials for your national inventory (see EPA’s Template 6: Archiving System).
* Oversee the establishment of arrangements between LULUCF sector data collectors and data suppliers.
	+ Collaborate with the NIC to record the institutional arrangements for the LULUCF sector in EPA’s Template 2: Institutional Arrangements.
	+ If required, develop agreements such as Memoranda of Cooperation (MOC) with necessary organizations (e.g., Ministry of Forestry, Ministry of Agriculture, universities) to assist with activities required by the LULUCF Sector Lead (e.g. data collection, generating GHG estimates), as appropriate (see EPA’s Memorandum of Cooperation template).
		- Contact federal agencies/ministries or non-governmental organizations to inquire about the existence of satellite imagery data for categories such as Agriculture Residue Burning. Ensure this is done in coordination with the Agriculture sector that may also require access to imagery.
	+ Develop Scopes of Work (SOW) for government units to issue to engage contractors, and/or sector experts. Manage the work being carried out under these contracts to ensure it is meeting the requirements and needs of your GHG inventory sector (see EPA’s Scope of Work template).
* Identify which LULUCF categories are key categories in terms of their contribution to national emissions and removals.
* Consider potential improvements identified in the previous inventory for this sector. Assess whether to implement improvements based on the contribution to overall national emissions (by conducting a Key Category Analysis) and availability of resources (see EPA’s Key Category Analysis tool and its accompanying document, Template 5: Key Category Analysis).
* Oversee development of GHG estimates from all categories in the LULUCF sector.
	+ Determine the most appropriate IPCC methodology to be used to estimate GHGs for each category in accordance with decision trees.
	+ Oversee choice and/or development of emission factors.
	+ Document all data collection arrangements, methodologies, and assumptions, including use of expert judgment.
	+ Complete the relevant tables in EPA’s Template 3: Methods and Data Documentation.
	+ Determine the methodologies to be used to estimate GHG emissions and/or sequestration for soils and other carbon pools.
	+ Develop a complete and consistent representation of the land base to establish a clear delineation of land use types (i.e., forestland, wetlands, croplands, grasslands, settlements, other) and conversions of lands between these land use types.
	+ Coordinate with the Agriculture Sector Lead to determine emission calculations and activity data adjustments for overlapping categories such as Agricultural Soil Management and Manure Management.
* In consultation with the QA/QC coordinator (who should be identified in EPA’s Template 2: Institutional Arrangements), convene LULUCF sector working group to review calculations and perform initial Quality Assurance/Quality Control (QA/QC).
	+ QA includes review procedures conducted by personnel not involved in the inventory development process (e.g., experts not involved with estimate development, the public, other relevant agencies, non-governmental organizations, universities, etc.).
	+ QC includes routine reviews implemented by the inventory development team to measure and control the quality of the inventory as it is prepared (e.g., sector leads and supporting experts involved with estimate development).
	+ Ensure that QA/QC procedures are consistent with the general and sector-specific procedures described in EPA’s Template 4: QA/QC, which you should be able obtain from the NIC.
* Coordinate the response to comments received from QA (external) reviews of the LULUCF sector GHG estimates and update the inventory if necessary.
* Review the final LULUCF sector GHG estimates and the narrative describing the assumptions, methodologies, and results.
* Oversee the development of the uncertainty analysis for the LULUCF sector.
* Identify any improvements needed for subsequent inventories, related to activity data, emission factors, methodologies, or other components of developing the estimates. Document these improvements in the relevant tables in EPA’s Template 3: Methods and Data Documentation, and discuss them with the NIC for prioritization in the overall inventory improvement plan (Template 7: National Inventory Improvement Plan).