

**DEFINITION**  
**Leakage Design Element**

**ODF Forest Carbon Working Group**

**Definition – Leakage:** Countervailing activities or actions that occur elsewhere as a result of implementing the project result in increased carbon dioxide emissions that counter the carbon offset benefit accruing to the project.

**Types:**

*Activity Leakage* – Countervailing activities which result in carbon dioxide emissions elsewhere counter to the carbon offsets accruing to the project are the result of a physical activity response to the project. The activity leakage can be *internal* – conducted by the host or owner of the project – or *external* – conducted by an outside entity not tied to the project. Example (Internal Leakage): The carbon offset project might be to lengthen the forest management rotation age of the stand or ownership defining the project. That same owner could decide to accelerate harvest on a stand or parcel outside what is considered the project to compensate for the project's longer rotation age. Example (External Leakage): Same project as above, but third-party changes behavior as a result of observing the project being implemented.

*Market Leakage* – This is a type of external leakage. The countervailing activity occurs as a result of a market response to implementing the project.

**Desired Outcomes for Protocol Approaches to Leakage**

- Administratively Simple -- Encourages participation from within all landowner types by being simple, cost effective, and operationally and administratively functional.
- Measurable and Verifiable – Based on a scientific basis, leakage is measurable and can be monitored/verified so that the appropriate deduction in reported carbon offsets from the project can be made. For example, if market leakage in timber markets is the concern, the measurement and monitoring is based on the known interactions of supply and demand for the market the project is located within.
- Consistency with National and International Designs -- Should be able to incorporate into national and global protocols and designs.
- Equity across Offset Sectors -- Leakage should be treated the same across all carbon offset project sector categories (e.g., energy efficiency treated the same as forestry).
- Enforceability – Sets specific performance and other conditions so that leakage is detected and corrected.
- Captures International Leakage – The approach explicitly takes into account global market leakage of meeting the U.S. regional demand for wood products when the project defers (through extended rotations) or withdraws (through greater reserves) timber supply.