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| **Global Forest Watch – a decade of monitoring global forest extent and change** |
| Global Forest Watch (GFW) represents a unique research to operations global forest loss monitoring capability. Operational monitoring of forest loss is increasingly important as it impacts a variety of key ecosystem services, for example biodiversity loss due to reduced habitat, global warming due to deforestation, and impairment of hydrological systems due to land use expansion. This talk will recount the history, current state, and future plans for the global forest product suite. The approach has changed over time, due to improved data inputs, methods, and other refinements. Forest loss nominally constitutes tree cover mortality for trees >=5m and >=30% tree cover extent, and includes natural and human-induced loss events. Attributing loss dynamics to causes/drivers is an ongoing objective, and now includes a concurrent loss due to fire layer. Drivers of forest loss are otherwise attributed through sample-based analyses. Forest extent reference maps allow specific geographies to be studied, for example trends in the rate of primary humid tropical forest loss. These high carbon stock, high conservation value forests are the focus of global climate change mitigation strategies, and GFW capture their relative loss at national scales. Future versions of the product will include a consistent algorithmic framework informed by forest structure, building on prototype work estimating woody canopy cover and tree height. Harmonizing forest loss, gain/recovery, and structure will mark a major advance in consistently tracking both state and dynamics of the globe’s forests. Forest alerts have been expanded globally and reflect a near-real time source of forest disturbance information for land managers. Global forest loss maps also facilitate IPCC-compliant forest extent and loss area estimation from probability-based samples. Integral to any forest mapping and monitoring program, probability-based samples of reference data allow for unbiased estimators with known uncertainties to be applied. Key to these reporting methods is leveraging accurate maps such as the GFW forest loss layer, which acts as a targeting mechanism in generating precise and unbiased area estimates. GFW is a first of its kind global monitoring system, advancing in capability as data and methods allow in order to generate the most timely and accurate information available on the state of the world’s forests. |