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|  | ***Methods*** | ***Types of changes detected*** | ***Type of Data*** | ***Satellites and temporal scale*** | ***Types of change*** | ***Software Environment*** | ***Key Reference*** |
| 1 | Continuous Change Detection and Classification (CCDC) algorithm | + Land cover trends  + Discrete events  -Abrupt change  + Gradual change  +-disturbances  + Seasonal variations | *+ Indices signal*  *+ Reflectance bands* | *+*All imagery  *+ Temporal scale: Monthly* | *Near-real time*  *All land cover* | *GEE*  *R-statistic* | [doi.org/10.1016/j.rse.2014.01.011](https://doi.org/10.1016/j.rse.2014.01.011)  (Zhu and Woodcock, 2014)  *low producer's accuracy for identifying forest disturbance with relatively small change magnitude* |
| 2 | Continuous monitoring of land disturbance (COLD) (Zhu et al., 2020) | + Land cover trends  + Discrete events  +Abrupt change  + Gradual change  +-disturbances  + Seasonal variations | *+- Indices signal (less helpful)*  *+ Reflectance bands* | *+* Landsat  *+*All imagery  *+ Temporal scale: Monthly* | *Near-real time*  *All land cover* | *R-statistic* | <https://doi.org/10.1016/j.rse.2019.03.009>  (Zhu et al., 2020)  *A modified version of CCDC that uses spectral unmixing to target changes due to forest disturbance (identify low-magnitude forest disturbances)*  *works well for places that are relatively stable, but may be ineffective for places that are frequently disturbed(e.g., agriculture and urban areas)* |
| 3 | Continuous Degradation Detection (CODED) algorithm (Bullock et al., 2020) | + Land cover trends  + Discrete events  +Abrupt change  + Gradual change  +-disturbances  + Seasonal variations | *+- Indices signal*  *+ Reflectance bands* | *+* Landsat  *+*All imagery  *+ Temporal scale: Monthly* | *Near-real time*  *All land cover* | *GEE*  *R-statistic* | [*https://doi.org/10.1016/j.rse.2018.11.011*](https://doi.org/10.1016/j.rse.2018.11.011)  *(Bullock et al., 2020)*  *cause a higher omission rate in areas with low data availability but can be solved by incorporating other data e.g Sentinel* |
| 4 | Breaks For Additive Seasonal and Trend (BFAST) (Verbesselt et al.,2010) | + Land cover trends  + Discrete events  + Abrupt change  + Gradual change  +disturbances  + Seasonal variations | *+ Indices signal* | +All imagery  *+ Temporal scale:* *Monthly* | -None  *All land cover* | *GEE*  *R-statistic* | [doi.org/10.1016/j.rse.2009.08.014](https://doi.org/10.1016/j.rse.2009.08.014)  (Verbesselt et al., 2010) |
| 5 | LandTrendr (Kennedy et al., 2010), | + Land cover trends  + Discrete events  +-broad disturbances  -abrupt change  -gradual change  -Seasonal variations | *+ Indices signal*  *+ Reflectance bands* | *+* Landsat only (all images)  *+ Temporal scale: yearly* | -None  Forest only | *GEE*  *R-statistic* | <https://doi.org/10.1016/j.rse.2007.03.010>  Kennedy et al., 2007  https://doi.org/10.3390/rs9050479 |
| 6 | A Bayesian Estimator of Abrupt change, Seasonal change, and Trend (BEAST) (Zhao et al., 2018) | + Land cover trends  + Discrete events  + Abrupt change  + Gradual change  +disturbances  + Seasonal variations | *+ Indices signal* | +All imagery  *+ Temporal scale:* *Monthly* | -None  *All land cover* | *R-statistic* | (Zhao et al., 2018)  <https://doi.org/10.1016/j.rse.2019.04.034> |
| 7 | Vegetation Change Tracker (VCT) (Huang et al.,2010), | + Land cover trends  + Discrete events  +- limited disturbances  - Seasonal variations | *+ Indices signal* | *+* Landsat only (all images)  *+ Temporal scale: yearly* | -None  Forest only | *R-statistic* | [doi.org/10.1016/j.rse.2009.08.017](https://doi.org/10.1016/j.rse.2009.08.017)  Huang et al., 2010  [doi.org/10.1016/j.foreco.2008.12.023](https://doi.org/10.1016/j.foreco.2008.12.023)  (Li et al., 2009) |
| 8 | Composite2Change (C2C) (Hermosilla et al., 2016). | + Land cover trends  + Discrete events  +- limited disturbances  - Seasonal variations | *+ Indices signal* | *+* Landsat only  (all images)  *+ Temporal scale: yearly* | -None  Forest only | *R-statistic* | <https://doi.org/10.1080/17538947.2016.1187673> |
| 9 | Exponentially Weighted Moving Average Change Detection ( EWMACD) (Brooks et al., 2014) | + Land cover trends  + Discrete events  +broad disturbances  + Abrupt change  + Gradual change  - Seasonal variations | *+ Indices signal* | *+* Landsat only (all images)  *+ Temporal scale: yearly* | *Near-real time*  Forest only | *R-statistic* | DOI: 10.1109/TGRS.2013.2272545  Brooks et al., 2014) |
| 10 | Detecting Breakpoints and Estimating Segments in Trend (DBEST) ( Jamali et al., 2015) | + Land cover trends  + Discrete events  +broad disturbances  + Abrupt change  + Gradual change  - Seasonal variations | *+ Indices signal* | *+ AVHRR GIMMS*  (all images)  *+ Temporal scale: yearly* | -None  *All land cover* | *R-statistic* | <https://doi.org/10.1016/j.rse.2014.09.010> |
| 11 | ITRA – Image Trends from Regression Analysis (Vogelmann et al., 2012) | + Land cover trends  +disturbances  -+ Abrupt change  + Gradual change  -Seasonal variations | *+ Indices signal* | *+* Landsat only (all images)  *+ Temporal scale: seasonal (summer (May through September)* | -None  All woody vegetation | *R-statistic* | [doi.org/10.1016/j.rse.2011.06.027](https://doi.org/10.1016/j.rse.2011.06.027)  Vogelmann et al., 2012  <https://doi.org/10.1016/j.rse.2009.04.014>  Vogelmann et al., 2009 |
| 12 | VerDET – Vegetation Regeneration and Disturbance Estimates through Time (Hughes et al., 2010 | + Land cover trends  + Discrete events  +broad disturbances  -+ Abrupt change  + Gradual change  -Seasonal variations | *+ Indices signal* | Landsat only Temporal scale: Temporal segmentation of annual series | -None  Forest only | *R-statistic* | [New Remote Sensing Methods for Detecting and Quantifying Forest Disturbance and Regeneration in the Eastern United States (tennessee.edu)](https://trace.tennessee.edu/cgi/viewcontent.cgi?article=4198&context=utk_graddiss)  Hughes et al., 2010 |
| 13 | MIICA – Multi-index Integrated Change Analysis (Comprehensive Change Detection Method (CCDM) (Jin et al., 2013) | + Land cover trends  + Discrete events  +limited disturbances  -+ Abrupt change  + Gradual change  -Seasonal variations | *+ Indices signal* | Landsat only Temporal scale: Bi-temporal differencing of annual series | -None  *All land cover* | *R-statistic* | <https://doi.org/10.1016/j.rse.2013.01.012>  Jin et al., 2013 |
| 14 | TimeSync (Cohen et al., 2010  ) | + Land cover trends  +-disturbances  -+ Abrupt change  + Gradual change  -Seasonal variations | *+ Indices signal* | *+* Landsat only (all images)  *+ Temporal scale:Yearly* | - | *R-statistic* | <https://doi.org/10.1016/j.rse.2010.07.010>  Cohen et al., 2010 |