Supplementary Material

Tab. S1 - Description of satellite data used in the study.

Year	Satellite	Sensor	Landsat scene Frame/path	Spatial resolution (m)	Date	Tasks
1989	Landsat-5	Thematic Mapper (TM)	137-044 137-045	30	12 .01.1989	Mapping
2010			137-044 137-045	30	30.01.2010 30.01.2010	Mapping
2011	RapidEeye	The Jena-Optronik multi-spectral imager, the Jena Spaceborne Scanner JSS 56	-	6.5	4 Scenes: 29.01.2011 1 scene: 06.03.2011 1 scene: 07.04.2011	Accuracy assessment

Tab. S2 - Error matrix for classification. The points were generated by simple random sampling. Overall classification accuracy: 87.00%; overall Kappa Statistics: 0.7588.

	Forest	Other land	Water	Total (classified)
Forest	100	16	2	118
Other land	20	146	0	166
Water	0	1	15	16
Total (reference)	120	163	17	300

Tab. S3 - Error matrix for classification. The points were generated by stratified random sampling. Overall classification accuracy; 88.67%; Overall Kappa Statistics: 0.7940

	Forest	Other land	Water	Total (classified)
Forest	100	10	0	110
Other land	23	146	0	169
Water	0	1	20	21
Total (reference)	123	157	20	300

Tab. S4 - The description of probable error sources in woodlot mapping.

Category of error sources	Description
Interpreter error	There are two types of interpreter's errors, omission error and commission error. For omission error, the interpreters mistakenly omitted pixel groups that belonged to tree cover and the class was assigned to another land category. Commission error was rare in this mapping activity, but occurred when some pixel groups were assigned as forest but in reality did not belong to tree cover.
Boundary pixel/mixed pixel	The pixel size of Landsat and RapidEye imagery is 30 m and 5 m, respectively, and one Landsat pixel represents 36 RapidEye pixels. Therefore, the pixels of a Landsat scene located at the boundary often appeared as mixed pixels representing both tree cover and non-vegetated surface. In the accuracy assessment, a random point could be located in a different class value of a RapidEye pixel, which was originally belonging to a mixed pixel and classified as another class interpreted on a Landsat scene.
Small in size	The minimum mapping unit of the woodlot map was approximately 0.18 ha. The extent of tree cover lower than this threshold was not mapped. If the samples on a RapidEye scene were located in areas where spatial extent of woodlot coverage was lower than the minimum mapping unit, then this would result in misclassification.
Class assignment errors	In the accuracy assessment, the class value of a map was assigned as the land cover class belonging to the majority of pixels within a window size of 3×3 (thematic map derived from Landsat scene). This type of error originated if the centre pixel, where the random point is located, belonged to a different class than the class belonging to majority of pixels in the window.
Fragmented woodlot parcels	There are some fragmented woodlot parcels, partly covered by trees and partly by other land covers. The polygon parcel was mapped as tree coverage, particularly when the majority of such polygon belonged to tree coverage. Error was generated in the fragmented landscape if the sample was placed on other land within such polygons.
Trees arranged in linear shape	The width of the linear shaped plantation was at 30–50 m in the region. These plantations could not be mapped on a Landsat scene and error was reported when samples are placed on such trees visible on the RapidEye image.
Vacant space within woodlot parcels	Small vacant spaces were sometimes seen within woodlot parcels. These are often not clearly visible or distinguishable on a Landsat scene but are detectable on a RapidEye image. Error was reported when samples are located in the vacant space within a woodlot parcel.
Houses in woodlots	Houses are common in some woodlots, which are not often detectable on a Landsat image but are visible on RapidEye imagery appeared as bright spots. Placing samples on those spots (houses) incurred commission errors in the accuracy assessment.
Boundary image shipment	Time and efforts were given to co-register Landsat and RapidEye scenes. However, image-to-image matching was sometimes not precise in the entire study area because of the differences in spatial resolution of two scenes. Error was reported in one case of accuracy analysis (points generated by stratified random sampling) because of a small and localized shipment between two scenes.
Combined effect of mixed pixel/small size	Small woodlots are sometimes appeared as mixed pixels on a Landsat scene and those pixels were occasionally overlooked or misinterpreted by the interpreter. Therefore, these pixels have been omitted on the Landsat-derived woodlot map and resulted in omission error. The mistake was reported during the accuracy assessment when sample points were placed on trees detectable on a RapidEye scene.

Fig. S1 - Examples showing the sources of uncertainty in Landsat derived woodlot maps. Landsat image is presented in bands 4, 5, and 3. RapidEye imagery is displayed in 5, 4, and 3 band combinations. Figures a, c, e, g, and i represent Landsat TM images and Figures b, d, f, h, j represent RapidEye images: (a–b) representation of mixed pixels, (c–d) roadside plantation, (e–f) vacant space in woodlot, (g–h) fragmented landscape inside woodlot, and (i–j) houses within woodlots. Crosshair and arrows have been used to show the location of random point and mark the object, respectively.