

Abstract template for the conference “A century of national forest inventories – informing past, present and future decisions”

Dear author. This is a two-page template that in the first page will ask for information on presenter name, topic, and preferred presentation form.

On page two, you are asked to fill in your abstract in the format and font size indicated. Please remember to include authors affiliation information in the footer section of page two. The length of the abstract may not be more than one page including references.

Abstract title:		Revisiting the main attributes of Polish forests
Take-home message:		<i>Preliminary results calculated on the basis of NFI indicate that the actual forest area in Poland is about 10.4 million hectares (34.0%), which is clearly more than the official statistical data in this matter. NFI allows not only for the registration of land use (including forests) but also for effective monitoring of changes taking place in this use.</i>
Presenter name:		Marek Jabłoński, Bożydar Neroj
Presenter contact info:		m.jablonski@ibles.waw.pl , bozydar.neroj@zarzad.buligl.pl
General topic, see website: <small>(please double click on the check box and activate the relevant one)</small>	<input checked="" type="checkbox"/>	Improving future NFIs by learning from the past
	<input checked="" type="checkbox"/>	NFIs today and in the future
	<input type="checkbox"/>	Cutting edge and futuristic inventory techniques and technologies
Preferred presentation form:	<input checked="" type="checkbox"/>	Oral presentation
	<input type="checkbox"/>	Poster
<p><i>Abstracts will be reviewed by members of our scientific committee and you will be given information on decisions in due time after the submission deadline has passed.</i></p>		

Revisiting the main attributes of Polish forests

Marek Jabłoński¹⁾ and Bożydar Neroj²⁾

Introduction: Referring to land and property register (LPR), forests in Poland cover about 9.5 million hectares, which corresponds to 30.9 percent of the total land area. Over 81% of forests are public, and detailed forest management plans are prepared for them every 10 years. Until 2009, when we completed the first cycle of the National Forest Inventory in Poland, information on private forests was rather low and incomplete. The results of the first NFI cycle, that covered only forests in the LPR, showed that the growing stock, especially in private forests, was underestimated. In the meantime, we realized that the spontaneous appearance of trees on abandoned agricultural lands, observed especially in recent decades, has not been fully recorded in the LPR (Jabłoński et al., 2017). For this reason, as part of the third NFI cycle, launched in 2015, the measurements have been extended to wooded areas that meet the definition of a forest, but are not recorded in official registers as forests. In this paper, we intend to present the legitimacy of using NFI for the revision of official data on the area, growing stock, origin and other parameters of Polish forests.

Materials and methods: The NFI methodology implemented in Poland uses a 4×4 km grid with clusters consisting of five plots (Michalak and Zajączkowski, 2010). Under this scheme, almost 99,000 sample points were set up in Poland. Every year, one-fifth of the points are examined. A constant sample of 400 m² is established at each point classified as a forest. Under the 3rd NFI cycle, two forest definitions have been implemented, reflecting: (1) the statements from the Forest Act and LPR, (2) the thresholds for the coverage of tree crowns as submitted in accordance with the Kyoto Protocol reporting. The percentage of forests is determined using a binomial approach, assuming that the total forest area in Poland is well known and free of errors. Although NFI in Poland is a one-step inventory, is supported by data from other sources, such as aerial photography, records from forest management plans and other. Taking into account the Forest Resources Assessment according to FAO as well as the Forest Europe guidelines, some parameters such as the origin of forests and the actual use of land in forests in LPR are assessed under the 3rd NFI cycle.

Results: The preliminary results for the forest cover calculated on the basis of NFI amount to approximately 10.4 million hectares (34.0% of land area) that is clearly higher (by about 0.9 million hectares) in relation to official statistical data. The mean volume and age in forests not included in the LPR (at 140 m³/ha and 29 years) is significantly lower than in the forests for cadastral data (at 280 m³/ha and 58 years). According to NFI data, about 22% of forests included in the LPR were established by means of natural regeneration and 78% were planted. Obviously, the reverse situation occurs in areas classified as forest, but registered as non-forest land in the LPR. However, the situation in which 1/4 of these forests originates from planting, points to the imperfection of previous methods of forest area assessment.

Conclusion: The results of our research emphasize the legitimacy of implementing a new forest resources assessment system in Poland. The assessment of land cover at all points of the NFI grid allows to monitor forest area changes in Poland, including for the purposes of the FAO and UNFCCC.

References: Please delete if not relevant. Otherwise use short format:

Jabłoński et al., 2017, *iForest* 10: 315-321

Michalak and Zajączkowski, 2010, in: *National Forest Inventories. Pathways for Common Reporting*, Springer, New York, USA, 425-436