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CHARACTERISTICS OF LATVIAN NON-INDUSTRIAL FOREST OWNERS AND THEIR POSSIBLE ROLE IN THE SPREAD OF THE SPRUCE BARK BEETLE

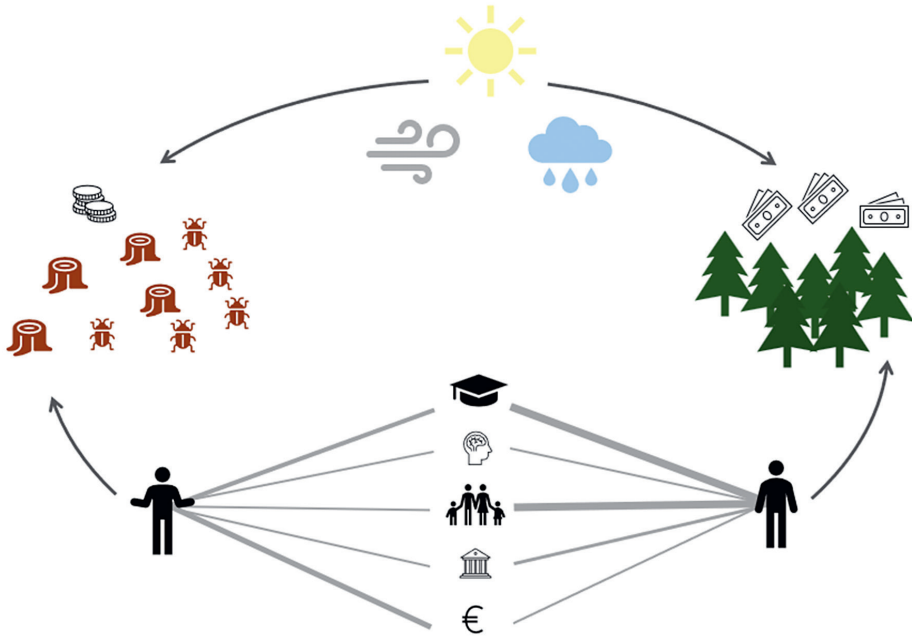
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Abstract – The spruce bark beetle (*Ips typographus*) is becoming an increasingly significant destabilizing factor in forest ecosystems in Northern Europe, including Latvia, under the influence of climate change. The fragmented ownership structure of non-industrial private forests (NIPF) and the action or inaction of forest owners increase the importance of collective action in limiting the spread of the pest. The aim of this study is to analyse the socio-economic impact of the bark beetle on NIPF owners in Latvia and to assess their potential for engagement in risk mitigation. The study is based on a literature review and an online survey (n = 75) comprising 87 structured questions on forest management practices, knowledge level, risk perception, and actual behaviour in the context of bark beetle outbreaks. The data were analysed using descriptive statistics. Although 68 % of respondents report being knowledgeable about the bark beetle issue, preventive action overall remains limited. Among those who had observed damage in their forest stands (49 %), 62 % have taken or plan to take measures, whereas 30 % have not implemented any action. This indicates that direct experience with damage significantly increases the likelihood of action; however, a group of owners with limited response capacity persists even under conditions of direct threat. It can be concluded that NIPF owners' engagement in bark beetle control cannot be explained solely by the level of awareness, but is also related to institutional and motivational factors. Targeted informational support, professional training, and economic incentives may facilitate a shift from reactive to timely and collective action.

Keywords – *Bark beetle outbreak; climate adaptation; Non-Industrial Private Forest (NIPF) owners; socioeconomic resilience; sustainable forest governance*



The spread of the spruce bark beetle (*Ips typographus*) and socio-economic factors in Latvia's non-industrial private forests: the role of owners in risk mitigation

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