Supporting integrated and systemic management of windthrow crises by public decision-makers

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\textbf{BELGIAN CONTEXT}

- Last destructive storm in 1990 (Vivian) → loss of experienced people and empirical knowledge
- Very fragmented forest ownership → very tiny perception of windthrow risk
- Pushing of forests’ multifunctionality → manifold stakeholders, sometimes unknown
- Low risk culture from public authorities → diverging goals and involvement after windstorms
- Shrinkage of public resources → competition for forests’ goods and services
- Storm damage management not at the top of agendas → storm damage management at the top of agendas
- reluctance to invest in risk management

\textbf{INTEGRATED MANAGEMENT}

- Dealing with all storm-related aspects in a same process
- Considering also secondary and tertiary impacts of storms
- Understand and combine desires and beliefs from all stakeholders
- Promoting Sustainable Forest Management practices
  - ...but also managing other biotic and abiotic risks in the same way

\textbf{SYSTEMIC APPROACH}

- Holistic approach encompassing internal and external drivers
- Aiming at enhancing systemic resilience
- Identifying and solving systemic bottlenecks (i.e. transport, storage)
- For improving the collective welfare of the forest-based sector
- For mitigating macro-economic impact of storms

\textbf{TOOLS & METHODOLOGIES FOR SUPPORTING PUBLIC AUTHORITIES}

- Regional framework for storm damage risk management (policy and strategic levels)
- Simulation-based DSS for managing windblown timber supply chain at the systemic scale
- Contingency planning, training of staffs and knowledge transfer
- Regional damage assessment procedure (within 72 hours) supported by on-line tools
- GIS-based DSS for locating sprinkling storage terminals and selecting them after disasters
- From strategic to operational management of timber storage: the example of anaerobic storage

\textbf{Key Challenges}

- Improving public risk governance and awareness
- Enhancing systemic resilience of the forest-based sector (structural effort)
- Facilitating the implementation of decisions, both politically and administratively
- Share good practices among forest community but also listen to sectoral (external) needs
- Enhance collaborative efforts, during both prevention and response steps (i.e. logistics)