The Damage Indicator (DI) and Degree of Damage (DoD) approach, as it was introduced with the EF-Scale, is not only useful for buildings and engineered structures, but also for wooden plants. In the present EF-Scale only two DIs are related to trees – no. 27 for hardwood and no. 28 for softwood. In this new proposal similar tree species or genera (major subdivisions of families) with similar capability of resistance are grouped together. The work is based on forest inventories. As a compromise between necessary distinction and high complexity 10 DI groups for trees are proposed. For each of these 10 DIs, 3 - 6 subdivisions are provided for different ground properties and other parameters. The proposed number of DoD classes is 7 for all DIs. As the related wind speeds are calibrated to the F-Scale, the F-Scale denotation is used. In general this approach is suitable for an International F-Scale (IF-Scale), as proposed by ESSL.

<table>
<thead>
<tr>
<th>DoD 1</th>
<th>DoD 2</th>
<th>DoD 3</th>
<th>DoD 4</th>
<th>DoD 5</th>
<th>DoD 6</th>
<th>DoD 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf damage and dead branches broken</td>
<td>Injury to branches and crown parts broken</td>
<td>Impact or trunk snapping</td>
<td>Impacting or tearing out, transport of leaf parts</td>
<td>Debarking due to sandblast effect</td>
<td>Debarking due to ball effect</td>
<td>Debarking due to other effects</td>
</tr>
</tbody>
</table>

### Stability Parameters
- **1 Oak**
  - Average ground & susceptible stand OR tree roots
- **2 Beech**
  - Average ground & susceptible stand OR tree roots
- **3 Other Hardwood**
  - Average ground & susceptible stand OR tree roots
- **4 Self Hardwood**
  - Average ground & susceptible stand OR tree roots
- **5 Spruce**
  - Average ground & susceptible stand OR tree roots
- **6 Pine**
  - Average ground & susceptible stand OR tree roots
- **7 Fir**
  - Average ground & susceptible stand OR tree roots
- **8 Larch and Douglas**
  - Average ground & susceptible stand OR tree roots
- **9 Shrubs**
  - Average ground & susceptible stand OR tree roots
- **10 Palms**
  - Average ground & susceptible stand OR tree roots

### Damage to trees outside the forest edge, branches and crown parts broken, spruce behind are totally destroyed, DI 1e, upper F1 damage

Stand condition lead to different habits and stability. The combination of DI, DI Subdivision and DoD one can rate the storm intensity. Two examples for hardwood are presented above, three examples for softwood below.

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**Mighty oak track snapped**

**Photo: Oliver Schlenzcek**

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**Damage to tracks 3f, upper F3 damage**

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**Debarking due to sandblast effect**

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**Debarking due to other effects**