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2.6.2 Effects of avalanches on trees and forests; 3. Avalanche dynamics: models and impact; 3.1 Principles of avalanche dynamics; 3.1.1 Physical principles; 3.1.1.1 General remarks; 3.1.1.2 Characteristic criteria of avalanche movement; 3.1.1.3 Avalanche velocity; 3.1.1.4 Model laws of avalanche movement; 3.1.1.5 Mathematical models for avalanche dynamics; 3.1.1.6 Constitutive law; 3.1.2 Dynamics of flow and powder snow avalanches; 3.1.2.1 Avalanche release; 3.1.2.2 Movement of flow avalanches
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Sommario/riassunto

Large, high-energy snow avalanches can have high destructive consequences in developed areas. Each year, avalanche catastrophes occur in many mountain regions around the globe. This causes a large number of fatalities and severe damage to buildings and infrastructure. In some mountain areas, especially in the European Alps, a high level of safety for settlement areas is attained by application of technical avalanche defense construction. Simultaneously, new risk potentials continue to emerge in mountain regions from building in endangered areas, the establishment of new roads and railway lines
