



## **Definition of permafrost in AAG The International Encyclopedia of Geography: connection of glacial and periglacial environment.**

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Permafrost is defined as the thermal state of the ground or rock that remains below 0 ° C for at least two consecutive years. This definition in the initial period of permafrost studies included both periglacial and glacial environments because ice was widely regarded as a rock analogous to all other rocks found on Earth.

Nowadays, although ice is still classified in the collection of minerals and progressive specialization in scientific development caused the disconnection of glaciology and periglaciology. It is obvious, however, that ice always remains frozen and that its great accumulations in the form of glaciers and ice sheets are stable enough to meet the definition of permafrost. For this reason, it is obvious that the permafrost encompass also those components of the cryosphere.

The geophysical profile of glacial permafrost, however, will differ from that which is appropriate in the periglacial environment. First, glacial permafrost will not have active layer which remains seasonally at the positive temperature above the permafrost table. Secondly, together with the thermal classification of glaciers, which is characterized by cold ice and temperate ice layers, there is also a distinction between two types of glacial permafrost. The first - completely frozen, includes the layer of cold ice, usually located above, and the second layer of temperate ice remaining in the state of pressure melting point, that is, not completely frozen. Freezing however is not required in the definition of permafrost but only a negative temperature, and the temperature of the melting point is always below 0 ° C.

Such definition of permafrost has been published in The International Encyclopedia of Geography published in the Collaboration of the American Association of Geographers and Wiley publishing house (Dobiński 2017) and may serve as a starting point in the re-integration of the geographical environment in a uniform approach to the study of all components of the cryosphere especially the two most important: permafrost and glaciers. In addition, this definition, like other earth sciences, has a broader and more universal character, because it can be applied to a correct understanding of the cryosphere on other celestial bodies whose surface is made of an icy-lithosphere.

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